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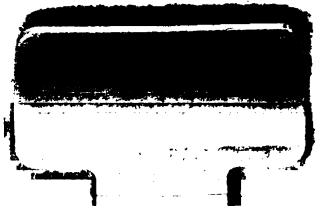

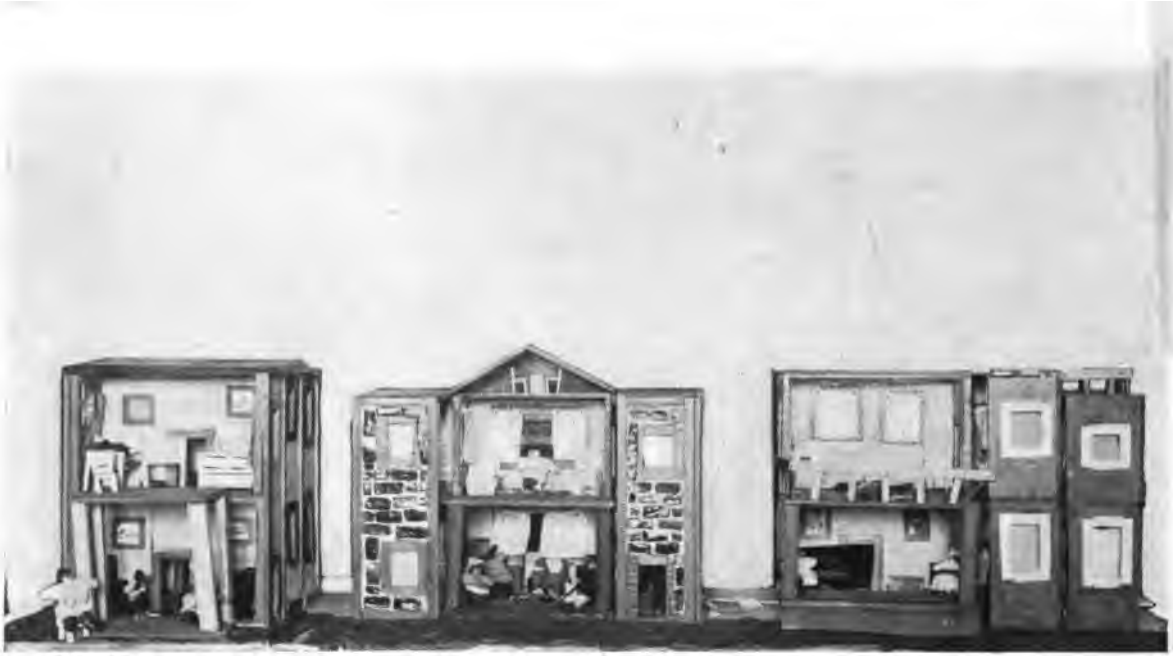

GOOD CHILDREN STREET

THE CEMENT, THE BRICK, AND THE FRAME HOUSE

A PROJECT CURRICULUM

DEALING WITH THE PROJECT AS A MEANS OF ORGANIZING THE CURRICULUM OF THE ELEMENTARY SCHOOL

BY

MARGARET ELIZABETH WELLS

SUBMITTED IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE OF DOCTOR OF PHILOSOPHY IN THE FACULTY OF PHILOSOPHY, COLUMBIA UNIVERSITY

PHILADELPHIA AND LONDON
J. B. LIPPINCOTT COMPANY

LB1027
.N71

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PHILADELPHIA, U. S. A.

ACKNOWLEDGMENTS

THE following student teachers in the State Normal School at Trenton, N. J., during 1918–1919, deserve special mention for their untiring work, which resulted in definite contributions to the development of this experiment: Miss Lillian Buchanan, Miss Grace Covey, Miss Marion Gagg, Miss Catherine Gribbins, Miss Edith Margerum, Miss Lillian Martenis, Miss Lina Markert, Miss Marian Schneider, Miss Winifred Stuart, Miss Bertha Swain, Miss Emma Veale.

To Dr. J. J. Savitz, Principal of the State Normal School, who permitted the experiment to be carried on there; to Miss Kate D. Stout, Supervisor of Training, who cheerfully made many necessary and troublesome adjustments; to Dr. Frank M. McMurry, of Teachers College, Columbia University, who encouraged the author to make this report of the results of the experiment; to Dr. William A. McCall and Dr. William C. Bagley, both of Teachers College, who made suggestive criticisms, and to Dr. Frederick G. Bonser, who as her principal in the Speyer School of 1912–1913 sowed the seed, and as her major professor during 1919–1920 helped her to prepare the harvest; to one and all of these, the author desires to express her heartfelt gratitude.

To her devoted friend, Miss H. Mary Cushman, who was most helpful in many phases of the experiment itself and who has rendered invaluable service in the careful editing and indexing of this report, she now publicly offers her thanks.

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FOREWORD

THERE are many interpretations of the project method. Miss Wells has made and developed one interpretation which lays emphasis upon the selection of a major project for each grade of the elementary school, large enough to provide a basis for most of the work of that grade throughout the year. Within each major project arise minor projects related to the major purpose and providing the immediate activities which make up the daily work of the respective grades.

The hope of progress in education lies in experimentation by which any means offering reasonably possible improvement may be tested and evaluated. Miss Wells has gone forward with the application of her interpretation of the project method to the extent of developing its details for the full work of the first three grades, and indicating in general outline the work for the fourth, fifth, and sixth grades. Children in the first three grades have been taught under this plan of organization.

The outcomes of the work as developed are checked up in terms of the subject matter as usually organized under the subjects of study. Measured by this form of checking, there seems to be quite as much of arithmetic, geography, reading, writing, and other regular subjects covered as under the usual organization. The units of these subjects are taken up in situations which naturally call for them, giving them a sense of immediate worth. In addition to this, there are many elements of subject matter and many forms of desirable activities represented which are not usually found when the respective subjects are presented in the formal way. As far as the testing of the work by this method goes to show its values, there

is no loss by comparison with the outcomes of work as usually presented, and there is decided gain in the outcomes not found at all in the usual formal work of these grades.

Few who have not attempted an organization of school work on the basis of large projects followed by appropriate minor projects growing out of the larger will appreciate what a prodigious amount of time and effort is required to develop such a volume of teaching material as is here presented by Miss Wells.

From the most progressive educational literature of today, there is a careful selection of references offered to support the principles, given in Sections II and III, upon which the general plan is based. These principles lay stress upon the more significant psychological and social aspects of education, and endeavor to combine them by consistent unification in applications that are practicable.

Whether teachers adopt the suggested organization as a whole, or attempt to use but individual units of its detailed parts in the enrichment of their work, the book should prove decidedly stimulating and helpful. It suggests many ways of connecting the life interests and environing activities of children with the subject matter of the school studies as usually organized. Even in a school in which the teachers must follow rather mechanically organized courses of study, there is room for the introduction of much vitalizing activity to awaken greater interest and contribute larger social meaning for the work required. The detailed projects here developed will offer many helpful suggestions which teachers working under such limitations may follow with interest, profit, and satisfaction.

Among elementary school teachers everywhere, this book should help to stimulate and direct interest to the needs and possibilities of humanizing and socializing the

A PROJECT CURRICULUM

INTRODUCTION

THE immediate problems of education are those of curriculum making and curriculum use. What shall the normal child be taught? How shall he be taught?

The conservatives still cling—some of them unconsciously—to the doctrine of formal discipline. The progressives think and practice freedom in its various conceptions and misconceptions.

But is there not a middle way, the common-sense way, which bases its method, first, on a knowledge of child nature; second, on the demands which life—that of the child as well as that of the adult—makes on the individual? All educators agree that the child is one of the two essential factors in education. Most of them name the curriculum as the second; but the writer contends that this is true only when the curriculum satisfies these demands of life.

The following study attempts the formulation of a curriculum which shall answer life's demands because it *is* life, and its administration permits the child to live in the school as naturally and as wholly as he lives out of it.

Proofs that this curriculum is sound in theory are given in Sections II and III. That it is practicable is evidenced by the fact that it "worked" in the first three grades of the Training School of a State Normal School, under serious handicaps. The teachers in each grade were inexperienced and, being students in training, were changed every ten weeks or oftener. The writer, as supervisor of these three grades, was responsible also for the teaching of two large classes of normal students daily for

a part of the year, and for the remainder shared in the supervision of practice teaching out in the state, so that she was frequently absent from all three rooms for hours at a time, and sometimes for whole days.

That the curriculum, even under these adverse conditions, accomplished as much as the traditional elementary school—and more than this—appears in Section IV. The conditions of the experiment were such that exact scientific measurements were not possible. Indeed, for many of its most valuable results scales of measurement have not yet been devised. It is the hope of the writer that the time, the place, and the means may speedily conjoin for trying out the curriculum here formulated, under the more typical conditions of a more normal elementary school, in all the six grades, and that some one may then be inspired to apply the method of statistical inquiry, both in theory and in practice, to this repetition of the experiment.

SECTION I

THE CURRICULUM AS WORKED OUT IN TRENTON, N. J.

A. INTRODUCTORY PROJECT—PLAYING "FAIR"

At the opening of school, in order to establish coöperative relationships among the children of the three grades for the supervision of which the writer was directly responsible, "playing Fair" was used as the unifying project. This choice was suggested by the N. J. State Fair which was held at Trenton early in September. School was closed one day for this gala event, every child receiving a free ticket. Of course, practically every child used this ticket, so here was a common experience. The following day the teacher called a general assembly of the three grades and allowed the children to tell of their experiences. There was a very free discussion, for the children were full to overflowing. Many things could not be easily expressed verbally, so the children were invited to show in any way they could what they had seen. This led to drawing pictures, making diagrams or ground-plans, acting out scenes in an impromptu dramatization, and the suggestion by the children that they could make a race track, a Ferris wheel, etc. Response was general and spirited. When interest ran highest the teacher seized the opportunity to say, "You make me feel that I am spending another day at the Fair. How many of your mothers and fathers, your sisters or brothers, were there?" Not many had been, for most of the children were from poor families.

"Since you have 'played Fair' so well for me this morning, how could you give your mothers a chance to go?"

"Play it for them."

"If you can work out a good fair, we'll let your mothers and any others of your family who want to come, spend a whole half day at our Fair."

The next question, "How can you do this?" opened up a discussion of ways and means. Of course so general a question brought forth very miscellaneous suggestions. To meet the need for organized work on the problems, the teacher asked such questions as:

"Why do states, counties, etc., have fairs?" ("To show the best things they can raise." "To make more people want to raise these things.")

"What things are needed for a fair?" (Lists made on the board, of suggestions growing out of the experiences of their day at the Fair.)

"How can we get these?" ("Make them." "Collect from school garden." "Bring from home.")

"How shall we run the Fair?" (Committees needed; work of each; badges for committees.)

"Where shall we hold it?" (A note to Dr. Savitz, the Principal, asking where the Training School Fair might be placed.)

"How advertise it?" (Posters needed.)

"What shall the work of each grade be?" (Each grade decided to choose at a later meeting what it wanted to do, its suggestions being submitted to the committees in charge, and to the teacher, who judged mainly from the standpoint of ability.)

I. THE WORK OF THE FIRST GRADE

The next day the question, "Why have fairs?" introduced in the first grade a review of the points brought out in the assembly.

"Now, what can we do, in this room, to help make this a fine Fair?"

After a spirited discussion, the grade voted to furnish animals, flowers, vegetables and fruits, a peanut stand, a side show and a merry-go-round, tickets for both these attractions, and signs to indicate the location on the fair-grounds of all the features supplied by this grade.

(a) **Animals.**—In the discussion of "fair" animals, the domestic varieties were emphasized. The selection of these for the exhibit provided opportunity for some study of the cow, the pig, the sheep, the horse, the hen, the duck. But the children strongly desired to have some wild animals there also; so these were introduced as a menagerie.

The art work took the form of drawing and cutting animal forms. But the children's attempts to do this in a free way did not satisfy their own standards of "prize" animals, and they gladly accepted the suggestion of tracing the outlines from large models. Cardboard was used as a material not too hard for them to cut, yet firm enough to stand when the little back support for each figure was attached. The children were allowed to color the animals as well as to trace and cut them; they also cut out the little "props" and pasted them on. Some animals were modeled in clay by all of the grade, and the best of these were kept for the Fair.

(b) **Flowers.**—A study of fall flowers comprised:

1. Naming the flowers in the school garden and those brought from home or from the fields and woods.

2. Teaching and encouraging the children to take care of these flowers so as to keep them in good condition to exhibit at the Fair.

3. Drawing, coloring, cutting out, and mounting paper flowers, the best to be kept for the Fair. The children were so enthusiastic in this work that they made enough sunflowers to form a hedge around the room. They gathered all the sunflower heads from the school garden as they

ripened and saved the seed, so as to make sure of sunflowers for next year's first grade.

In connection with this flower study, the myth, "Clytie's garden," was given. In a very simplified form it was written on the blackboard and printed on oak tag, with a "price-and-sign-marker," to form a chart. Later it was copied in the children's readers (the "Family Books" described on page 23) as a good story for them to read to their mothers and fathers. In addition to this varied use of the myth, the children worked out a sand-table representation of it.

(c) Vegetables and Fruits.—The children recalled the kinds of these which they had seen at the Trenton Fair. Such forms as could be brought into the schoolroom from home or from the school garden were studied carefully. As the children learned to recognize the vegetables and fruits most commonly used in the home, two lines of study were followed:

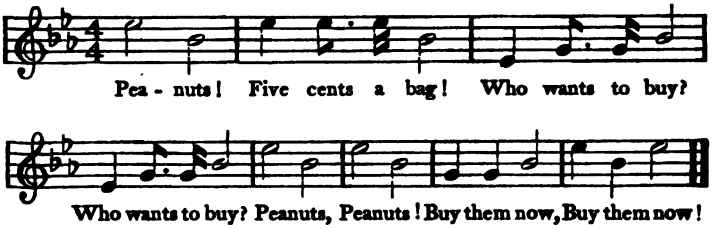
1. Modes of preparation for cooking, the necessity for thorough washing being stressed.

2. Methods of preserving appropriate for each—drying, canning, etc. To illustrate these points, the children pickled beets and dried corn and apples, the products to be kept for the Fair. Making labels for these exhibits provided opportunity for the study, unawares, of isolated words and phrases and thus served as drill for sentence work.

One of the children brought a huge pumpkin, unannounced, "to be exhibited at the Fair." Perishable fruits and vegetables were modeled in clay and colored, or they were drawn on paper or cardboard, colored, and cut out. While the children were getting this exhibit ready, the room fairly glowed with red-ripe tomatoes and their vivid green leaves, oranges, rosy-cheeked apples, bananas, and beets. Even Clytie's garden on the sand table had vegetables and fruits added to its flowers.

(d) Peanut Stand.—There were some peanuts growing in the school garden, but the crop was far too small to stock a stand at the Fair. So the children made clay peanuts. These were carefully modeled, dried, and the proper number counted out into the paper bags which the children made for this purpose. A lesson in printing "Peanuts—5 cents" was motivated by the desire to be among the privileged few who proved themselves fit to label these bags.

The peanut sellers decided to advertise their wares by a call or song. The children first decided on the words; then, as Fair day was drawing very near, they asked the music supervisor whether she wouldn't make a tune for this call instead of helping them to work one out for themselves. So they learned to sing:



Those who could sing it best were thereby constituted peanut sellers.

The words of the song were copied for them in their Family Books.

(e) Side Shows.—Much valuable thought and work grew out of this very important feature of the Fair. After reading or telling a number of stories, the teacher asked the children to select those which would "act out" as the best side shows. After much discussion, during which all sorts of pros and cons were advanced, the children's votes elected "Simple Simon" and "Three little pigs." Simple Simon thus came to be the first Mother Goose char-

acter to figure in the Family Book. And Simple Simon had the honor of furnishing their first lesson in phonetics. For when the rhyme was written on the board one child commented on the letters beginning Simple Simon's name, and the teacher seized this opportunity to teach the S sound.

The dramatization of "The three little pigs" gave the children a lot of pure fun in addition to its many other values—the development of imagination, training in speech as well as in other modes of expression, facts concerning the life of pigs, etc.

(f) **Merry-go-round.**—The work in physical education at this time took the form of the singing game "Carrousel," in order to furnish a means of entertainment at the Fair. The children worked out many interesting variations of the game, instead of always having all sing while all played. (1) One group sang while the rest played, some being the horses, others taking the part of riders. (2) The names of the riders were substituted for the Swedish names in the song. (3) Instead of singing the words, the children hummed the tune in imitation of the carrousel organ. (4) One group hummed, another sang, and the rest played horses and riders. (5) Tickets were sold to the riders and collected during the ride.

This last modification introduced the nickel, and formed the basis of an arithmetical game giving unsuspected drill. The ticket man who failed in making change or in counting his tickets lost his job.

(g) **Tickets.**—More formal tickets than those just mentioned were made in advance for the side shows, and these furnished very significant work. The children decided on the best size, and they measured, cut, and printed the oblongs of cardboard, after a spirited discussion as to the amount of admission to be charged.

(h) The last piece of work was the making of **Signs**

or labels—posters, by courtesy—for all the parts of the Fair for which the grade was responsible. All the children diligently practiced—without urging—writing, in large, free script, using broad kindergarten pencils, "Animals," "Flowers," "Vegetables," "Fruits," etc. The children were encouraged to make the words large enough to be read at a distance—the teacher knowing that the small muscles were not ready to act; the letters were at least two inches in height, many copies being even larger. A committee, appointed before the work began, selected the best signs, for use at the Fair.

2. THE WORK OF THE SECOND GRADE

Here also the points of the opening discussion in the general assembly were reviewed and organized. The grade voted to furnish fences; the race track; the grand stand; race horses, sulkies, and jockeys; the Ferris wheel; a side show; tickets for the races, the Ferris wheel, and the side show; and posters.

(a) All the Necessary Fences.—A list of these was made. The most important fence was to enclose the whole fairground. The boundary line (drawn on the floor by the third grade) was measured, to determine the number of feet of fence needed. Each child assumed responsibility for a certain number of feet of completed fence. Each child was allowed to present a sample of the kind of fence he thought it would be best to use, employing wood, cardboard, or paper. The results were brought in, inspected, and voted on. The standards were (1) cheapness, since the Fair would last only a short time; (2) sufficient firmness to endure for this time; (3) feasible means of support; (4) possibility of execution by *all* the children. Some of the samples rejected on the last score were chosen for the minor enclosures and made by groups of volunteers.

Cardboard of medium weight was used for the main fence. One of the most interesting problems was the working out of the means of support. It certainly did tax ingenuity and patience to get that fence to stand up!

(b) The Race Track.—This was a flattened ring of clay about 27 inches in diameter, made by a group of children selected by their proving, in a try-out of the grade, that they could do it best. Few succeeded in getting their section of track thick enough, wide enough, flat enough, and of the proper curve, to prove themselves fit. The teacher tried to discourage the children's undertaking so difficult a method, urging them to make the track of some other material, but they clung so firmly to their assertion that "race tracks aren't made of paper" that she was obliged to yield. The progress of this project proved positively that play may rise to the work-level.

(c) The Grand Stand.—This was also made of clay, a very wide slab being overlaid by one just enough narrower to form one tier of seats, this by one still narrower, etc. Once more the children found that they had set themselves a difficult task, but the intense desire to accomplish it proved a sufficient "drive," and the result was reasonably good.

(d) Race Horses, Sulkies, and Jockeys.—Plasticene was used for these little figures, which were placed upon the race track.

Racing in various ways became the favorite play during this time. The most popular form was in groups of three, the "horse" putting his arms back to join hands with the "sulky," and the "jockey" running between the two.

(e) The Ferris Wheel.—Many cardboard and paper constructions of this means of amusement were offered, but the form accepted called for a main structure of wood, with carriages of paper. The inventor, with as

many helpers as he needed or could find, built the wooden framework, the other children helping by making the little carriages.

In the language work the following rhyme was developed:

"Merrily turns the Ferris wheel!
Up it goes, then down.
Now you travel through the clouds,
Now you're back in town."

The music periods were devoted to fitting a tune to these words—to be used at the Fair as well as in the Ferris wheel game, which the children devised since none could be found in any of the books available.

(f) A Side Show.—The children searched diligently through all the books in the school library for a story which they might dramatize as a side show. This search had to be confined to first-grade material, since the class had come into the grade very poor readers. As soon as a child found something which he thought appropriate, he read it to the class; if they thought it might make a good side show, it was tried out. The story of "The little pig's house," lending itself to a great deal of action and requiring a number of children to play it out, was finally agreed upon. In this process the weaklings in reading and dramatic expression were revealed. Thus the teacher had a basis for a later grouping of the children according to their reading ability, so that the better readers might not be retarded while help was given to the others.

(g) Tickets for the Races, the Wheel, and the Side Show.—These were made of different sizes, proportions, and colors, so that they might be easily distinguished. The prices decided on were 5 cts. for a ride on the Ferris wheel, 10 cts. for the side show; and 15 cts. for admission to the grand stand. In printing these tickets the chil-

dren learned how to spell all the words involved, to write the three numbers and to realize their relationship, and to use the abbreviation for cents.

In order to discover the best ticket sellers for the Fair, games were played which gave excellent drill in addition and subtraction.

(h) **Posters.**—In the art work for this grade, very simple posters advertising the features of the Fair were worked out.

3. THE WORK OF THE THIRD GRADE

After a review of the discussion in the joint assembly, the children of this grade, as the older and "wiser" members of the community, assumed the major responsibilities, as shown in the following list: a plan of the grounds; tickets of admission to the Fair; automobiles and aeroplanes; tents and buildings; exhibit of preserved foods; arrangements for races; a side show.

(a) **Plan of the Grounds.**—The first piece of work was to make a plan of the whole thing—to "set the stage," so to speak. Their ideas for the arrangement of the different features of the Fair were, of course, based on what they had seen at the "real" fair. Each child first submitted his plan on paper, in answer to the questions, "How shall we place the different parts of the Fair?" "How may we each see what the others are thinking about?"

Next, a list was made on the board of all the things shown in these individual plans. Then the children drew on the board a sort of composite picture or plan, embodying all these features. After the necessary corrections and additions, this plan was transferred from the blackboard to the floor of the room where the Fair was to take place.

The entrances, paths, race track and locations for the

different exhibits were sketched in and a name written on each, so that the children from the other two grades might know where to place their finished work when they brought it in. No child was allowed to write in a name until he had proved to the class that he could spell it correctly. This not only afforded an opportunity for the review of many second grade words but gave the children a number of new terms. Such words as main building, ticket booth, main entrance, farm animals, chicken house, side shows, race track, fences, grand stand, were thus added to their vocabulary.

(b) Admission Tickets.—It was left to the children of this grade to decide the price of admission. The suggestions of the other two grades were considered and acted upon by "the committee." After this weighty question was settled, the next thing was the making of the tickets. The size and shape of these, the color, and the "printing" which was to go on them had to be worked out. This involved measuring, drawing, cutting, the spacing of words and figures, the spelling of "Training School Fair —Friday, October —, 1918. Admission 25 cts."

Another matter of great importance was to find a good ticket seller, one who could "handle large crowds rapidly." So the arithmetic at this time was largely drill work which took the form of playing "selling tickets." Children had to learn to recognize the different pieces of money and learn how to make change. They manufactured money for this game, the teacher having brought pennies, nickels, dimes, quarters, halves, and $1, $2, $5, $10 notes to be used as patterns.

(c) Automobiles and Aeroplanes for Exhibits and Races.—This was an optional piece of work, but it aroused so much interest and competition that practically every boy tried to make one of each. There was great variety in the output. Some of the machines were made of paper

or cardboard; some of clay; some of the aeroplanes had a wooden framework covered with cloth. The children brought in a number of pictures and toy models.

(d) **Tents and Buildings.**—While the boys worked on autos and airplanes, the girls assumed the responsibility of making the tents and some of the buildings. A great deal of freedom was allowed here and the results showed much individuality. Paper and cardboard were used for the most part in these constructions.

It might be said in passing that the use of paper and cardboard was allowed in this project after the idea was developed with the children that the structures erected on fairgrounds are usually only temporary. But in the subsequent work of the year articles were made, as far as possible, of a more durable material than paper, since homes and their furnishings, stores and their fixtures, the public buildings in a city, are of a more permanent nature. Paper and cardboard were also used frequently on the sand table, for the reasons given above. The children soon learned to discriminate in the selection of material, trying to approximate as closely as possible that used in the "real thing."

(e) **Preserved Food Exhibit.**—This proved one of the most valuable phases of the third-grade work. A careful study of vegetables and fruits was made as the class planned this exhibit, involving trips to the garden and the gathering of fruits and vegetables there. Many of the children brought other varieties from home. "Fall fruits and vegetables" were not studied simply as such, but were considered from the point of view of saving them for winter use. The advantages of preserving fruits and vegetables; the various methods that may be employed; the economy of buying each when it is cheapest, to be used when it is dearest or perhaps impossible to obtain at any price; the choice of the best method for

each; the part of the plant used, whether root, stem, leaf, or fruit; the time for planting and for gathering each—all treated not as isolated topics but in relation to the "purposive activity," preparing an exhibit for our Fair. The material outcome was the actual pickling of beets and tomatoes, the drying of corn, beans, and apples, and the canning and preserving of peaches. Every child helped in each of these processes. The food was prepared in the schoolroom, but the heating or cooking was done in the domestic science laboratory because this was more convenient. But it would have been a very simple matter to attach a gas plate in the schoolroom, had the laboratory not been available.

It was decided during the progress of this work that if it was very well done the products might be served to the grade mothers at one of the school parties during the year.

(f) **Arrangements for Races.**—Since all three grades were to take part in the racing contests, the method of carrying out this part of the Fair program had to be determined. Each grade had planned its own races and had practiced them on the playground. To arrange the final program an assembly of the grades was called. The third grade, as the seniors, were allowed to take the initiative in the making of the plan and the choice of prizes. Little bows of different colored ribbon were decided upon, and the teacher volunteered to provide these rewards of success.

(g) **The Side Show.**—The writer is unable to give any details of this feature, because the class had voted to work this up as a surprise for her, under the leadership of one of the student teachers. Even the name of the story which was in rehearsal cannot be given, for the reason indicated in the next topic.

B. THE MAJOR PROJECTS

I. INTRODUCTION

Just before the day set for the Training School Fair, the schools were closed because of the influenza, and their doors were not reopened for a month.

By this time the clay grand stand and race track had cracked and crumbled, the cardboard and paper structures had sagged and collapsed. Everything was dusty and dingy, and the children's enthusiasm had died a natural death. They realized the impossibility of having a creditable exhibition, and it became imperative for the teacher to foster or to kindle new interests and to start new work.

But the Fair had accomplished the greater part of its mission—the essential part; the children were now three communities in one. At the first meeting of each of these little communities, memories of the pleasures of playing Fair prompted the suggestion from all sides, "Let's play something else." Each grade, beginning with the third, talked over with the supervisor, very informally, what this "something else" should be. The approach was made through the following questions:

"Why did we have such a good time playing Fair?" (Varying reasons given.)

"What did you like best to do?" (A list was made on the board as the children's replies poured forth.)

"Can you think of something else that we might play which would give us another opportunity to make houses, paths, fences, etc., as we did for the Fair, as well as to make some new things?" ("Playing city" was finally worked up to, by a series of questions.)

"What would you like to have the other grades do this time?"

The children rather resented the implication that they needed any help. Their attitude was so self-sufficient that

the supervisor left the room saying, "You'd better think it over, and in the meantime I'll see what first and second grades can offer, while you decide just *how* you'd like to play city."

Going into the first grade, the supervisor reported that third grade had decided to play city. The children showed much interest and said, "Can't we play it, too?"

"That's just my reason for coming in to see you this morning. Can you think of something interesting to do that will be so useful in a city that the third grade will be as glad of your help as they were in playing Fair?" (The class, as stated before, was in charge of student teachers most of the time.)

"What would you like to do?" (Various suggestions, listed on the board.)

"In making your final choice, what are some of the things you must think about?" ("Something easy." "Something that will be fun." "Something the third grade can't do." "Something we all want to do." "Something you want us to do.")

After these standards had been developed, they were applied to the suggestions that had been made. The teacher saw that most, if not all, of the scattered activities accepted might be combined under the term "playing families," and she succeeded finally in getting this very wording from the children. The direct question which elicited this answer was, "Can you suggest a name for this game which will interest people as much as 'playing Fair' did?" The interest which had been shown in the earlier project by the Normal School students and the principal and faculty of both Normal and Training departments, as well as by visiting teachers and parents, had greatly encouraged the children and was well remembered.

"How will you play families?" (All sorts of suggestions.)

"I'll leave you to work out your plan with Miss ——; and may I ask you to let third grade know how you will help them in their new play? You may decide how you want to send this message."

The supervisor's next mission was to get the second grade started in the new work. Practically the same approach was made, with the additional suggestion that the first as well as the third grade needed their help, for both had decided on very important play work for the rest of the year, work that they couldn't possibly do as well alone as they could with second grade's assistance. Many of the responses ran parallel with those of the first grade, but as a whole they showed more variety and indicated broader experience.

"What can you do to supply some important needs of both city and families? We might make a riddle of this. 'What can be done that will help a city as much as it helps the families in the city?'" (A list of suggested activities was made on the board.)

"Of all these things, how will you decide which it will be best to choose?" ("Something pretty." "Something we are sure we can do." "Something for both grades." "Something that won't cost much." "Something we'll have fun out of.")

"Playing store" was decided upon, and the supervisor left the room telling the children to think of ways and means, and to send their answer to third grade.

The result of this was a tentative plan for the work of each grade. Those of first and second grades were submitted to third grade by visiting delegations. The members of these committees were chosen by virtue of (1) the abundance of their suggestions for the work; (2) their help in formulating the speech which was to present their plan for third grade's approval; (3) their proving during the rehearsals of this speech in their own grade that they

could explain the plan clearly and attractively. Most valuable training in thinking and in speaking was given in these rehearsals. Criteria were developed by the children themselves as the preparation of the reports progressed; such as, "They must not be too long." "Say what they must know." "Make the third grade want us to help them." "Say what you mean." "Do not be scared saying it," etc.

Since the details of the speeches were not fixed and then memorized, the aim being to have the children think coherently on their feet, and since the visiting delegations were not escorted by the writer but by a student teacher, the addresses cannot be reported here. But the offers were enthusiastically received and adopted, the sterile soil of third grade having been cultivated in the interim. The supervisor had reminded the children that they had had a much better Fair by having first and second grades help, and had convinced them without much difficulty that they couldn't possibly work out all the details of the family life in the city nor all the details of a big department store; first, because there wouldn't be time; second, because there wouldn't be room, for what limited space was available for play-work *ought* to be shared with the other grades. The last shreds of opposition melted away under the supervisor's promise that whenever either first or second grade "struck snags" in their work third grade might be called in to help and that, if there were time enough after completing everything else in the city, each child might "go into business" for himself, since a city always has other stores in addition to its big department store.

The first and second grades needed no preparation to greet with delighted interest the report of how third grade had planned to play city. Then the first and the second grades presented their plans to each other, in order that

each unit of this triple combination might know what the other two were doing and hoping to do.

While the machinery was thus being set up, adjusted, and oiled, the new set of student teachers became acquainted with the children by having them show in various ways what they had done during the month the school had been closed and thereby discovering where the children stood in ability to read, write, and cipher. Had this vacation not occurred, the student teachers might have been instructed to review the outcomes of the Fair project, and thus learn to know the individual children.

At last the wheels of the year's projects began to go round. Comparatively few changes proved necessary during the carrying out of the plans as first made in each grade, so that the account which follows may be taken as the flesh clothing the skeleton outline worked out by the children to present to the other grades.

II. FIRST GRADE MAJOR PROJECT—PLAYING "FAMILIES"

(a) Organization of Families.—The children decided that there must be more than one family. They readily saw, too, that "there couldn't be as many as there are in a 'real' city, because there aren't enough of us to play it that way." A lively discussion followed, beginning with the question, "How many persons are there in *your* family?", "In yours?", etc. All the children in the class were counted several times by volunteers. There were thirty.

"How shall we divide these into families?" The children found it hard to agree upon, or even to suggest, a method for doing this. The question, "Whom must we have to make a family?" established father, mother, and child as "minimal essentials."

"Shall the child be a girl or a boy?" Differences of opinion made it necessary to have both. This swelled the number of members to four.

"How old shall the children be?" Again a difference of opinion, some wanting big brother and sister, some little brother and sister, the matter being settled finally by having both. The result was a family of six—mother and father, big brother and sister, little brother and sister.

1. *Choosing Children for the Different Rôles.*—Age and size were agreed upon as the basis for the grouping. Later there was some shifting within the groups and even some inter-group changes, according to ability.

The "sorting out" process involved the following judgments:

"How shall we choose the fathers?" (Age and, of course, sex basis. If the older boy were very small, size was also considered in this first grouping.)

"How many boys know their age?" (Practically all were either six or seven, so it became necessary to be more exact. Discussion was allowed here and valuable training was given in English as well as reasoning, though interest was not killed by insisting on academic correctness in every sentence.)

"How can we find out exactly how old you are?" ("Ask mother." "Have mother write it on paper." The latter being decided upon as the better way, the teacher was able thus to complete and verify the age records for her reports.)

"How shall we decide which boys shall be big brothers and which little brothers?" (Age or size and weight were used, according to circumstances. Each child was weighed in the physical education office. They measured one another to determine the tallest, the smallest, and the middle-sized.)

Mothers, big sisters, and little sisters were selected in the same way. The teacher tried to direct by unobtrusive suggestion. Other things being equal, she endeavored to have leaders—discovered through the "Fair" project—

for fathers and mothers. Whenever a decided lack of balance in the family became evident, changes were suggested, often by the children themselves. Such remarks as the following frequently came from the members of a group: "She isn't a good mother at all." "He isn't doing what the other fathers do." "Mary doesn't help as a big sister ought to." In consequence, perhaps Mary was made little sister, Susie having proved herself more big-sister-like. If relative size made this exchange seem very incongruous, Mary might be allowed to go into another family as big sister "on trial." This usually worked, whether because Mary took hold of herself lest she be degraded into a little sister or because the psychological conditions in the new family were more favorable. Mary might even be tried out as mother in another family.

In the case of one boy, Richard, his being made the father of a family, after having been the most mischievous little brother imaginable, simply transformed him from a troublesome, stupid, uninterested and uninteresting youngster into a responsible, wide-awake, splendid pupil. One may well ask how such a transfer as this could be justified to the other children. It was managed by placing the emphasis on the fact that the father of the other family was decidedly falling from grace; it was patent to everyone that *he* wasn't fit to be the father of a family! So intent were the children on this fact that they accepted without demur the supervisor's suggestion that Richard have a trial at that position. "True, he hadn't been a very good little brother; but perhaps he could do better as a father than David had, and David ought to be made a little brother because it wasn't very likely he could be a good *big* brother when he had proved so unreliable as a father." One sees how discipline would take care of itself in this situation, as it did in so many others.

The dropping out of some children as their parents

moved from town, the enrollment of new pupils, an unequal number of boys and girls in the school, upset from time to time the original plan for the composition of the families. This difficulty was overcome by having an aunt or an uncle, a grandfather or a grandmother, or perhaps a middle-sized child, in some of the families.

While interest in the selection of the different members of the families ran high, the question, "What do you know about animal families?" introduced "The three bears" and "The three goats Gruff." These stories were told and retold, illustrated, and dramatized, with great delight.

2. Learning the Names of the Members of Each Family.—"You all know one another's names, but how can you best remember, as well as show to others, what member of the family each one is?" ("Write it on the board." "Write it on paper.") Both of these suggestions were followed, and the result formed the first family reading lesson. Script was used for the board work. Then the sentences, "Mary is the mother," "John is the father," etc., were printed with the price-and-sign-marker on large sheets of oak tag, each one headed with the surname of the father as the family name; *e.g.*, "The Healy Family."

"Can you think of some good ways to let the folks at home know how you are playing family at school?" ("Tell them." "Have them come to see us." "Write about it.")

"We can do all three. Where shall we write it?" ("On sheets of paper." "Put it into a notebook." "Make books to write it in.")

The last-named method was agreed upon. But since this "Family Book" was to be large enough to have stories put into it from time to time throughout the year, the children were shown that making it would be too diffi-

cult a task for them to handle. The third grade could have made these books, all the citizens becoming binders for the time being. Another year, profiting by this experience, the supervisor would surely arrange to use this work to fill in the time while the city plans were being developed. But the need for the books not having been foreseen in time to allow for third-grade workmanship without too much interference with third grade's own project, since the construction work on the city had already begun, a "friend in need" made the books in a hurry. Whole sheets of foolscap paper were cut in half crosswise, sewed together through the center, and then sewed to a strip of cloth which was pasted into a strong art-board cover, cloth-hinged.

The decoration of these covers became a third-grade art unit. Each child was allowed to decide whether he would use pictures of the six members of the family, in making his design, or a picture of the house the family lived in. *The Funny Little Book* by Johnny Gruelle, published by the Volland Company, Chicago, 1918, was used for suggestions for these designs, as well as for the printing of the title, "Family Book." Pictures and letters were drawn, colored with crayola, cut out, and pasted on the gray cardboard, with fine effect. There being more first graders than third, the children who first finished their covers creditably were allowed to design and decorate another.

First-grade reading was now being motivated by the prospect of having these books to take home at Christmas time, in order to read to the family there all about what the children had learned to do at school. So "Simple Simon," the peanut call, Clytie's garden, etc., had to be put in in greater haste than would permit all the necessary copying to be done by the student teachers then working in the grade, even if their handwriting had been suitable

for first-grade reading matter. So the commercial department of the Normal School coöperated by having all the lessons that had been given up to this point copied in the penmanship classes. Thereafter the lessons were put in, one by one, in the best handwriting of the student teachers.

3. Determining the Duties of Each Member.— "What shall each member of the family be expected to do?" This was discussed in a general way by the whole group. There was a good deal of overlapping and duplication of ideas, the children finding it difficult to differentiate the duties of father and big brother, mother and big sister.

"Who can suggest a better way of deciding?" ("Have all the fathers meet." "Have all the mothers meet," etc.)

"Do your mothers ever meet with other mothers to talk things over while they sew or knit?" ("My mother goes to a mothers' meeting." "My father goes to a club.")

"How many clubs do we need?" ("One for fathers, one for mothers, one for big boys and girls, one for the little children.")

"What are some of the things you must do in order to start your club work?" ("Elect a president." "Decide on a name." "Decide what each club will do." "Select colors." "Make badges.")

A time was set for the meeting of each club for organization. Since the supervisor and the student teachers wanted to see how the children would take hold of the thing themselves and to allow them to make a "report" of the proceedings, they did not attend these meetings, which were held simultaneously in the corners of the room. The necessity for talking quietly so as not to disturb the other meetings was in itself good training.

The fathers decided on the name "Fathers' Club,"

elected their president, and chose blue and orange as their colors, but reported that they could not make a badge, Here was a chance for the teacher's help. They decided that fathers in a school family ought to:

(*a*) Keep the rest of the family quiet in school.
(*b*) Help to keep the floor clean.
(*c*) Help others in the family when they need it.
(*d*) Help to pass and to collect materials for the family.
(*e*) Notice absentees and have them come to school next day, if possible.
(*f*) Make the children behave.
(*g*) Do the hard work—like lifting heavy things.
(*h*) "Mend the house."

The mothers voted to call themselves "Mothers' Club," the advocates of "Mothers' Meeting" being in the minority. They decided on purple and yellow for their colors, but "did not know how to make a badge." The best leader among them was chosen president without a dissenting vote, not even her own! The duties which they reported were, for the most part, duties of mothers in the home, such as washing, ironing, sewing, cooking, caring for the children, cleaning. The suggestion was made that the mothers of the school families would see that their children were clean and that the floor and desks were kept tidy.

The older and the younger children's clubs reported in the main that their work would be "going errands," "helping father and mother," etc. The duties of these clubs being so much alike, the two were finally merged under the name of "Helpers' Club." They selected red and green as their colors.

The supervisor attended the second meeting of each club, as a visitor. Entering into the discussions as politely and tactfully as she knew how, she succeeded in so guiding the proceedings that the specific work for each member of the school family was wisely decided upon. In no two families were all these individual responsibilities exactly alike, for after the possibilities were fully stated, each family decided upon its own division of labor. As the project unfolds, some of the differentiated work and the method of carrying it on will be disclosed.

The later meetings of the clubs proved most interesting. Entertainments were worked up with programs of story-telling, readings, dramatizations, etc. The activities of the club to a large extent paralleled the activities of the family life as it developed. Moreover, there were inter-club games, parties, and meetings to consider any crisis in the family life. From time to time the clubs made reports of their work to the third grade. This was not done so often for the second grade, since, the first grade being their regular customers, they knew most of the ins and outs of the family life.

(b) Making Doll Families.—The time for the next phase of the project had now come. So the teacher said, "What will help us to have more fun in playing family?" The children's first answers were so used in the succeeding questions that the answer, "Get doll families so that we can make real clothes and homes for them," finally came from them without their suspecting in the least that it was foreordained.

"How shall we get these families?" ("Bring them from home." "Buy dolls." "Make them." This last suggestion was accepted as being the most economical.)

"*How* shall we make them?" The answers here were so vague that the children were encouraged to bring dolls from home so that we might see how they were made.

Dolls of all sorts were produced the next day. One by one they were weighed in the balance and found wanting. "This one is too hard to make." "We can't get the stuff that that one is made of." "We don't know how Katie's is made." The only possibility was the rag doll, which had the added advantage of not being liable to break during the general and probably strenuous play of the class.

But making dolls from any "rags" which might come to hand would be too difficult a process for fingers that had never held a needle, so the supervisor produced the stocking dolls which she had borrowed from the domestic science department. The children were delighted with these, and the teacher offered to supply enough children's hose to serve as "skins." These were of three sizes—the smallest that could be found, to make little brothers and sisters; a little larger ones for big brothers and sisters; still larger, for fathers and mothers. One little white cotton stocking was given to each child. An incidental lesson in economy was given by the fact that dolls can be made by this method from the smallest possible amount of material, and without wasting even a scrap.

The making of the dolls was the *raison d'être* for a series of reading lessons, chiefly in the form of directions which each child, in the very nature of things, must learn to read before he could do the work. Each of the slower pupils who showed that he was making an honest effort to master the reading was helped by the teacher, in case his slowness was proving too great a hindrance to the others, in such a way that he thought he was doing it all by himself. And every child tried with all his might, for they were all exceedingly anxious to get at the making of those dollies. Who would not try to learn to read, "Cut the foot from the leg," when he was to be allowed to use the scissors as soon as he read it and could prove, by recognizing each word on a perception card or by

pointing to it in the sentence, that he had not merely memorized unconsciously? As each step in the manufacture was accomplished, the directions for it were copied into the Family Book, which the children were allowed to take home for that evening to read the story to father and mother. The complete series of reading lessons will be found in the Appendix, page 283.

At the time the dolls were making, cotton was scarce and we were all being urged to conserve it. So the next question was, "What shall we use to stuff our dolls?" All sorts of substitutes for cotton were suggested; the one decided upon as cheapest, most easily obtained, cleanest, lightest in weight, and softest, next to cotton, was corn silk. Each child brought as much of this as he could and it was dried on the window sill, the little sisters being appointed to turn it each day.

In the making of the dolls the girls had frequent opportunities to help the boys, though the latter, by the way, made no objection whatever to the sewing as such. They seemed proud of the fact that they were making the men of the family. If a child showed himself utterly unable to do this sewing, some other member of the family fell in to do it for him, but these cases were rare. Of course no high degree of skill was demanded, the standard being merely to sew the edges of each part together firmly enough to make it hold the corn silk and to sew the legs and arms on so well that they wouldn't fall off.

The tinting of the skin in the dolls and the addition of the features made a series of reading lessons which the children thoroughly enjoyed. But supplying the hair was the best fun of all. They insisted on having "real hair," so they were allowed to bring combings from home. The teacher had a fine opportunity here to teach the proper care of the head, the necessity for washing the hair, etc. A large receptacle of hot water was brought into

the schoolroom and each child washed his little wad of combings thoroughly before sewing it on the doll's head. Ivory soap was used. The school at this time was undergoing a plague of pediculosis, and the teacher stressed the frequent washing of the head as a preventive measure. Each little mother of a school family urged all her children to have their heads washed and she called to strict account those who failed to do so.

The dolls were bathed in tinted water in order to tone down the whiteness, or rather to tone up the grayness, which had resulted from much handling. The reading lesson, as usual, took the form of directions, and the writer has never seen such intense interest in learning to read as the desire to bathe those babies pink aroused in this class.

In the next series of lessons, the dolls asked for features. In response to this request, bead eyes were sewed on and stitches of wool or silk were made to represent nose, ears, and mouth. Individual differences were very evident in the resulting countenances.

The periods of time devoted to work on the dolls varied greatly in length. Indeed throughout the year, not the hands of the clock, but interest-span or a suitable stage of the work, determined the length of a period. The chief aim was not to teach so much arithmetic, so much writing, so much drawing, so much reading, each day, any more than in real life we do equal amounts of sewing, washing, ironing, baking, or sweeping every day, or certain amounts of plowing, seeding, hoeing, and harvesting. At times the development of the project called for all the customary school exercises, but often the greater part of the day was spent on only a few phases of the work. But the next day other phases had their turn, so that in the long run a balance was maintained. The flexible daily program secured results, as they are secured outside of school, without unnecessary interruptions to the main interest.

While the dolls were being made, the passing of materials, involving the counting of the different articles needed; their division into piles, one to be handed to each family; and finally the distribution within the family—"ladies first"—provided drill in both number facts and politeness.

As the children finished the stage of work in hand, they were allowed to get books—various primers and first-grade readers—from the closet, and browse in them at will. Sometimes when a whole family finished work ahead of the others, one of the teachers met with this group, encouraging and helping them in their reading. As already explained, the basic lessons in reading were furnished by the family development, using the vocabulary growing out of this; and phonetic facts were taught whenever occasion offered, from the days of "Simple Simon" on. Stories from printed books were read at this time "just for fun."

The idea in the writer's mind is that, even with children as young as these, habits of serious reading and of reading for pleasure, or leisure-time reading, may be developed side by side. In every case the serious reading was made as interesting as possible, and seldom did it fail to elicit very satisfactory reactions from the children.

(c) Dressing the Doll Families.—The dolls having been finished, the next step was to provide clothing for them.

"How shall we get clothes for our families?" ("Buy them." "Make them.") It was decided to use both methods, since we had so good a department store just across the street, "the street" being the school corridor, on the other side of which was the second grade's store.

The first lesson on dressing the dolls was worked out by one of the student teachers.

"How many people must be dressed in each family?" ("Six.")

"We'll write this on the board, so as not to forget, In how many ways can we put it down?" ("Six," "*Six*," "6," .)

"We have six people to dress. Who are they?" ("Mother has to be dressed." "Father has to be dressed." "Big brother has to be dressed." "Little sister has to be dressed," etc.) Each of these sentences was written on the board as it came from the children, one under the other so as to make the common elements conspicuous.

"Boys and girls, I was talking to a salesman from second grade this morning. Do you know why he is called a salesman?" ("Because he sells things.")

"What do you think he asked me?" (Mere guesses from the children.)

"He asked whether we were not ready to dress our dolls. I told him we were just about ready, so he is coming in to-morrow to find out how many kinds of people there are to be dressed in our families. In order to tell him, what shall we have to do?" ("Say how many." "Give him the order." "Learn to read the order to him.")

So the children set to work on the six sentences which had been put on the board. They recognized the "old friends" without any difficulty and quickly mastered the new words because of the repetition. After the whole had been read several times, the word drill was carried on by having two salesmen sell words, the point being to see which one could sell, *i.e.*, recognize, more words in a given time.

After the children had gained full command of the lesson, the salesman from second grade arrived to get the information needed by the store.

How the dolls should be clad was the next thing to be decided. This lesson, as planned by the other student teacher, took the following form. Notice the imaginary situations which were used to stimulate interest in lessons which might otherwise have been very prosy.

"What do you think I dreamed last night that Big Brother and Big Sister asked me?" (The children tried to guess.)

"They asked how we meant to dress Mother. I said that we hadn't yet decided, so they told me what they thought would be nice for her. What do you think they suggested?" ("A dress." "A coat." "A hat.")

"Yes, but they mentioned something else to keep her warm, instead of a coat, and something else than a hat for her head." ("A cape." "A bonnet.")

"Now you have thought of most of the things; but they said it in such a fine way. Listen. (As the teacher pronounced the words of the following jingle, she wrote them on the board slowly, giving the children time to look carefully at each one before writing the next. Where a blank appears, she stopped, and by a suggestive gesture, or, if necessary, a question, tried to get the needed word from the children.)

"Mother must have a pretty....., (dress)
And don't forget her....., (bonnet)
A cape of red or.....or.....
(blue, brown, or any other one-syllabled color)
With { What do you think it was trimmed with? } bright upon it."
(ribbons, or buttons)

"Now I'll read it through just as I thought I heard it. Who can read it in a way that would interest the salesman if he should come in now? Those who learn it first may be the first to dress Mother."

For the word drill, a large "mother" was drawn on

the board in the simplest possible outline, to be "dressed." Sketching in a line to indicate the cape, the teacher asked who could point out in the rhyme the word naming that garment, writing it on the cape as soon as some child displayed the necessary knowledge. Intending to ask for the color later, she so placed this word as to allow room for "red," etc. The child who volunteered might be rewarded in some simple way, as by writing his name on the board, perhaps just opposite the word he had given. The bonnet was then sketched and named in the same way; the "ribbons" or "buttons" of the cape were added; the remaining adjectives were written on the garments which they described.

"Now let us undress Mother and put her clothes away." A closet or trunk and a hat box were hastily drawn.

"What shall we take off first?" The child whose answer was accepted was allowed to erase the word, the teacher then writing that word, in the proper receptacle. This process completed, the children might be called on to name all the things in the closet, as the words were indicated.

The drill should be conducted very quickly, and may be varied greatly by the exercise of a little ingenuity. It has been described in greater detail than necessary for the skilled teacher of little children, for the sake of possible readers who have never seen the delighted interest of children in such work as this, have never realized how rapidly their vocabulary grows under such cultivation. Most of the details of later drills will be left to the readers' imagination, unless there is some new feature.

The children asked whether they might not dress Mother themselves, so several of them were allowed to make the sketches and ask the questions, the teacher writing the words for them. The words were left on the

board, and for several days children were seen, singly or in pairs, playing this game whenever the pressure of other desires allowed it, thus drilling themselves.

After a series of reading lessons on the garments needed for each member of the family, it was agreed that the first thing to be made was the union suit. This discussion afforded opportunity for much hygienic teaching concerning the kind and the care of underwear, the relative merits of wool and cotton, etc.

Valuable training in arithmetic was given in the initial lesson on making this undergarment.

Aim.—To have the child measure his doll to find out how much material to buy for the union suit.

"How shall we find out how much union suit material to buy in the second grade's store?" ("Measure the dolls.")

"And how shall we do this?" The child put one finger where he thought the upper edge of the suit should come, another at the doll's knee, then held these fingers up in the same relative position, saying, "I'd need so much."

"Is there not a better way to measure, for you see it is hard to keep your fingers just the right distance apart?" ("Use a ruler.")

"Where get the rulers?" ("You'll give them to us.")

"Don't you think you might buy them in the Model Department Store?"

A child, sent to investigate, reported that they had fine rulers on sale. The second-grade children had done very interesting and careful work in making rulers simple enough for first grade to use. They were a foot long, the inch being shown by a long red ink line, the half inch by a short black line.

The children, having purchased these, were interested in measuring everything in sight, thus again drilling them-

selves. In measuring their dolls for the union suits, the different members of the family checked up one another's results. The dolls were measured from shoulder to knee. Each child wrote the length on a piece of paper—his memorandum—" 4 inches "—" 5 inches."

Then followed another trip to the store, to buy the material. In this transaction the responsibility for measuring properly and for making change was placed primarily on the second-grade salesmen; but the first grade again, as when they purchased the rulers, felt the need for checking up the operations. They had not yet learned the arithmetical processes involved in computing cost and making change, but in the addition and the subtraction drills which followed, their strong desire to become ready reckoners for their next shopping expedition was very evident.

Each child made his own paper pattern, pinned it on the material, and cut and sewed the garment. A description of this work made the following reading lesson, which was learned in order that it might be read to second grade, who had expressed a desire to know " how the first grade made the little union suits from the material sold to them in our store."

" We have made union suits for our dolls.
Some are made of wool.
Some are made of cotton.
First we made the pattern.
Then we put the pattern on the goods.
We cut around the edges of the pattern.
We sewed the sides shut.
We left neck, armholes, and legs open."

Those who could read this best were selected to go to second grade, and permitted to show a few of the best garments to illustrate the reading.

Word drill—an underwear factory.

During the garment making, the children began to make fashion books. The art supervisor introduced the subject in this way: "Now that we have started to dress our dolls, let us play that our room is a dressmaking and tailoring shop. What do dressmakers and tailors use to help their customers decide how they want garments made?" ("Fashion books.")

The teacher had gathered a number of books showing styles for all the members of the family. The children first copied the illustrations they liked best, so as to get some idea of how to make pictures of garments to go into their own fashion books. Each family decided to have a book of its own, and one larger book was to be made for the art teacher who guided this series of lessons. The books consisted of sheets of light gray, green, or tan art paper, perforated, and tied together with raffia. As each garment was developed, the best of the patterns cut by each family and the best picture of that garment, carefully cut out after drawing and coloring, were mounted, side by side, on one sheet. By the time the dolls were completely dressed, the books were finished, each containing union suits, petticoats, dresses, shirts, trousers, capes, hats, caps, shoes and stockings—some on figures, others separate. Regard for harmony of color, for good arrangement and spacing, for careful mounting, and for the fitness of the garment's style were some of the valuable by-products of this project.

The next garments made were the little white petticoats for the female and the shirts for the male members of the families. This problem called for further application of measuring, with its drill in number facts, more practice in pattern making and in buying, cutting, and sewing, with the additional new features of putting lace on the petticoats, and an introduction to the source of cotton.

The opening question, "What kind of material shall we use?" was followed up by "What are yours made of?" One child was sent over to second grade for samples of material which might be used. These were discussed, comparing qualities with prices—1 ct. an inch, 2 cts. an inch, etc. The dolls needing cotton shirts were counted; then the number that must have muslin underskirts was ascertained.

"Where did the cotton for this shirt"—pointing to John's—"come from? Where was it before the factory got it? How did it look?" Cotton bolls were passed among the children and pictures of a cotton field were shown. Then a brief story of the cotton's journey from field to store was told, in somewhat this way:

"If this cotton cloth could talk, it might say, 'Balls like this were picked from the bushes and sent to a place where the seeds and dirt were taken out. Then the remainder took a ride to the mill, and there it was changed into long threads like these.'" Some of the warp threads and the filling of a piece of coarse cotton cloth, which had been raveled, were shown. It would be fine to have a set of specimens, which can be obtained from the nearest cotton mill or Commercial Museum, showing the various stages, from the carded mass, through the twisting processes, to the finished yarn. "Next these threads were woven into cloth like this (showing samples, or pointing to John's shirt) and sent to the stores."

"Do you know of other things than shirts and petticoats for which we need cotton cloth? Think of as many such things as you can before to-morrow. Tell your mother the story of cotton and ask her to help you find other things which come from these soft white balls which grow in warmer places than this."

Before the first-grade children made their first purchases of clothing materials at the Model Department

Store (see page 36), they received a letter from the second grade announcing that their new Dry Goods Department was now ready for business. The question, "What is the polite thing to do with this?" elicited the reply, "Write an answer." So the first-graders wrote their first letter.

"Dear Second Grade,

"Thank you. We will come.

"First Grade."

This was practiced, first on the board, then on large sheets of paper. The best specimen was sent to the store.

Next, dresses were made for mother and sisters, while fathers and brothers were being provided with trousers. This work afforded a review of pattern making and all the other skills begun before, as well as more buying, giving another opportunity for selection and for the weighing of values, while new interest came in choosing colors and trimming. Some of the dresses were made of silk, but only a few very simple facts concerning this material were taught. In beginning the making of trousers, the children played that Mamma Doll and Brother Doll were talking to each other, the dolls being used as puppets. The conversation ran somewhat like this:

"Mother dear, I need a pair of trousers; please get them for me."

"You shall have a pair of trousers. First grade will make them for you."

When it was time to make the capes, the teacher said, "It is getting cold. What do you wear to keep you warm out-of-doors? What can we do for our dolls? What can they wear that will be more easily made than coats?"

In cutting the capes the children were introduced to the circle, this design being the easiest for seamstresses so

inexperienced. In connection with the choice of materials, there was some study of the source and the preparation of wool. "Little Boy Blue" and "Baa, baa, black sheep" were taught and both were worked out on the sand table.

So the next reading lesson took the form of this little rhyme:

"Please give me a cape
For my dolly so dear,
That she may not be cold
When winter is here."

The use of the words, "coat," "cape," "cold," gave the occasion for teaching the sound of "c hard." In drilling on the words of this jingle, the teacher first put the following work on the board, the children eagerly watching every stroke of the crayon:

"Please give me — ——
For my —— so ——,
That —— may —— — cold
When ——— is ——."

Then she said, "Someone may make believe that she is dolly and wants the right words put into those spaces so that first grade can read the rhyme and get to work on the cape, for the weather is getting chilly." . . . "All right; Katherine now is dolly."

So Katherine goes to the board and points out the words as the teacher needs them to fill the blanks in regular order. As soon as this can be done readily, the teacher draws a cape on the board and writes in it the words of the rhyme. She points to a blank at random, and the child first tells what word is needed and then finds it in the cape, the teacher writing it as before while the child is allowed to erase the word in the cape. Still another form of drill may be given by allowing a child

to point out any word in the cape which he recognizes, asking another child to show in which blank it should go, the word then being transferred from cape to stanza.

Every lesson after its development in script on the board was printed on a large sheet of oak tag, thus building up the Family Chart. Perception cards were also made and both were frequently used for review and drill. Such work as this was often carried on: A chart was hung upon the wall, and its perception cards were displayed about the room. One girl, playing mother, wanted to make a dress. She asked the class for the things she needed. "I need the pattern." "Give me the needle." "Some one please get the hem for me." The aim was to vary the method of asking, as well as the method of finding or delivering the cards. The child who found the most words might be allowed to propose a new game, or to be "mother" if the children still wanted to play this one.

One day, after the completion of the dresses, capes, etc., a number of interesting advertisements came over from the Model Store. They were shoe and stocking ads, which suggested to the children a new need for their dolls. The discussion which resulted prepared the way for the next reading lesson. The dolls are supposed to be talking.

"Our pink toes are cold,
And we are too old
Not to have stockings and shoes;
So father and mother,
Sister and brother,
From these ads, please help us to choose."

The children themselves decided that they couldn't *make* shoes and stockings. Some of the reasons which they gave for this inability were: "The kid is too hard to stick through." "The shoes and stockings are too small." So they were quite ready to buy them. The new element

in this shopping trip was the taking of the dolls to the store to have their stockings and shoes tried on. The children learned the "pair" and "right and left" in the course of this phase of the project.

For the word drill, a large shoe and stocking were drawn on the board. The stocking belonged to the girls; the shoe to the boys. A team race was proposed. Each word recognized by a girl was written in the stocking, while the shoe received the boys' trophies. When the perception cards were all disposed of, more than half the words were found in the stocking, so the girls were applauded by the boys.

The stories, "Goody Two-Shoes" and "Cinderella," were told and retold while the children were dressing the feet of their dolls. To add to their enjoyment, the puppet show to which one of the other grades invited the little families proved to be Cinderella!

The Shoemaker's Dance formed part of the physical education work at this time. In an original shoe-and-stocking game, two children joined hands to form a "shoe," enclosing a third child, the "stocking." As many groups as possible having thus been formed, one or two odd stockings were left shoeless. At a signal from the teacher or from a child leader, all the stockings slipped out under the joined hands to find another shoe, the odd stocking trying hard not to be "odd" this time.

Supplying each member of the family with a hat or cap was one of the most difficult but one of the most interesting parts of the work. The materials used were felt, pieces of old stocking, straw, raffia, silk, and velvet, with crinoline for frames in a few cases. One of the aims was to teach the children how to name certain kinds of hats and to recognize the materials making a hat. The first step after the expression of a need for hats or caps was to put before the children hats showing the materials

just listed. There was a fair representation of varieties among the children's own head coverings and these were supplemented from the Normal students' cloakroom. After the first lesson with the actual hats, the children tried to draw some of them as guides in planning the hats and caps they meant to make. Then the models were removed and the children drew pictures from memory or imagination, and colored them. The attempt was made to have design and color fit the dress and cape of the doll. The material was then bought in the second grade. While in the store the children noticed the fine hats in the newly opened Millinery Department and expressed a desire to buy some of them. They were also captivated by the big, persuasive "HAT OPENING" poster which had been put up in the hall, beside the door of the Model Store. So they were allowed to buy one hat or cap, with the understanding that each should make another for his or her doll. That the doll should have *two* hats was incentive enough, and the fine "bought" ones served as guides to the inexperienced milliners of first grade.

To add to the success of the Model Store's hat opening, the kindergarten band had been engaged to play for the occasion. So the second graders sold hats to the first graders while the "kinder" played gaily, using blocks—some with and some without sandpaper—a triangle, a tambourine, and a drum, the theme being carried on the piano by the teacher. The third grade had been invited to see the opening, and the whole affair was a very happy one. The dolls, of course, had to try the hats on to make sure they were becoming and this process, as well as the packing of the purchases in the prettily decorated hat boxes which had been made by the Model Store people, helped to make the opening an interesting event.

During the hat work in the first grade there was some little study of feathers. The tying of knots and the making

of bows—two skills rather difficult for children of this age—were easily learned under the strong desire to make their hats as pretty as those they had bought.

While the doll making and doll dressing were going on, the club work progressed regularly and the family activities in the school shaped themselves more definitely around the very practical problems of living, working, and playing together in groups. Holidays as they came along were recognized in the families. These celebrations were usually inter-grade affairs, each room contributing something. For instance, the first grade invited the other two "to spend Christmas with the families living on Good Children Street"—for this was the name that had been decided upon by the families.

For this party each family was expected to make some definite offering in the way of entertainment. In preparation for this, "'Twas the night before Christmas" was read to the children, who then reproduced it on the sand table. One family was selected—or rather elected, because of good work on this little project—to tell the sand-table story at the party. Another family *made* a little dance called "Christmas Brownies"—a skipping, hopping, and bowing affair. One family told the Christmas story; another, selected by the music teacher as having done the best work during the teaching of the song, sang a Christmas song. The fifth family read a Christmas story from one of the little readers which the grade had been using in their intervals of leisure resulting from especially diligent and successful work.

One feature of the Christmas season which brought the families great joy was the gift from the teacher of five little balsam firs. Each was placed in the center of one of the large "family" tables which determined the usual seating arrangement in the grade. The trees arrived a few days before the party and were trimmed by the respective

families. This was done without any direction or supervision other than that which they received from one another as members of a family group. The decorations were supplied by the teacher, supplemented by the children's contributions from home, and the results were beautiful.

After the families' Christmas party, all the grades of the Training School were invited into the gymnasium, to sing around the big Christmas tree and to receive their gifts of candy and oranges from the principal of the Normal School. Each "father" carried his family's little tree into the gymnasium and the five were proudly placed in a circle at the base of the beautiful large tree.

A fine opportunity for art work was afforded by the making of the large "Good Children Street" poster, which served, in addition, two very practical purposes. First, it provided a covering for the glass partition which separated the room from the hall through which Normal School classes were constantly passing; second, it served to tell other people what first grade was doing. The introduction of this problem was brought about thus:

Said the supervisor, "The other day some one asked me what our first-grade boys and girls were doing. I replied, 'Playing family.' Now isn't there some way in which we might let people, for example, those teachers and Normal School girls who pass through the halls so frequently, know what we are doing without being obliged to ask some one, or even to come into the room?" Other questions were—"How shall we show that there is more than one family on this street?" "What else would you like to have in the picture?" ("People." "Sidewalk." "Trees." "Grass." "Wagons." "Autos.") "How shall we make the street pretty?" "On the way home notice the streets that you walk through and tell us to-morrow what makes them attractive."

The children reported the next day that the streets were clean, the houses built nicely, the sidewalks clean; there were grass and trees in front of some of the houses. These observations gave the children ideas upon which to work. Pictures of houses, mounted, were brought from the public library for the children to see. They were encouraged to cut pictures of pretty houses from the advertisements in old magazines. Finally, they cut out of wrapping paper, or even newspaper, patterns or shapes of houses, to try them on the foundation paper of the poster, which was about three yards long and a yard wide.

It was eventually decided that each family's house should appear on the poster, so the work became a group problem. The best house patterns were selected; then patterns for road, sidewalk, and trees were cut and placed on the large sheet of paper to get the proper proportions. All the patterns having been decided upon, various color schemes were tried out and one was chosen. Then the patterns were laid on the colored papers, each on the shade that had been selected for that object; the outline was drawn and then cut out. Finally each part of the picture was pasted in its proper position on the foundation sheet. The result was a very attractive cut-paper poster in harmonious colors, which did much to brighten a dark and dingy school hall. At the same time, this unit of art work was a preliminary and very suggestive step toward the making of homes for the doll families, the next stage in the development of family life.

While the poster was making, the work of dressing the dolls was being rounded out by a series of lessons on teaching the dolls how to take care of their clothes, and another on paying the dressmakers, the tailors, and the milliners. Some of the questions in the first series were: "After your mother has made your new dresses, what does she tell you the first time you wear them?"

"What do you do when you try to take care of your clothes?"

"Now, you little mothers of the doll families, who have made some fine clothes, must teach your children the things you try to do for *your* mothers." The following list of good habits was gleaned from the children's talks to their dolls:

1. Wash clothes often.
2. Do not wait till the clothes are very dirty.
3. Keep body clean.
4. Brush clothes.
5. Keep them on hangers.
6. Put clothes in the air at night.
7. Wear aprons and overalls.
8. Brush hats when dusty.
9. Put hats away in boxes after wearing.
10. Don't throw hats in the dirt. (A favorite pastime at recess.)
11. Brush and polish shoes.
12. Wash stockings often.
13. Change and wash underwear often.

The children performed very conscientiously the duty of teaching the dolls these rules, and these lessons did actually work over to a large extent into good personal habits and better care of the children's own clothing.

When it came to paying the bills, the teacher was made the head dressmaker, the children her assistants.

"Now that we dressmakers have delivered the garments to our customers (the dolls), what must they do?" ("Pay for them.")

"How will they know how much to pay?" ("We must send them bills.")

"Then let us begin to make out the bills this morning."

The teacher put the names of the garments on the

board in pairs, since the children's ability to add was limited to two figures.

Girls' bills.

Union suit..	4 cts.	Dress	9 cts.
Petticoat ...	3 cts.	Cape	5 cts.
	7 cts.		14 cts.

etc.

Boys' bills.

Union suit..	4 cts.
Shirt	7 cts.
	11 cts.

etc.

When the children had learned how to do this, paper and pencil were given to them and they were allowed to charge what they pleased. The bills were collected, to be sent. The next day the children became dolls and paid the bills. After the errors in addition were checked and corrected, the bills were marked "Pd." and the teacher's initials added. The change was given only when the child could tell what it should be. The need for more skill in addition and subtraction was discovered and rediscovered to the child in these transactions, and he was brought to the point of a real desire for drill.

The work on dressing the dolls was then closed by playing that they wrote "Thank you" letters for the clothes that they were wearing.

"You have bought or made the dolls' clothes," said the teacher. "I know they'd like to thank you for them. If they could talk, what do you think they would say?"

So the children helped to word this letter as the teacher wrote it on the board:

"Dear First Grade,

"I want to thank you for my clothes. They are very pretty. I wore them to a party. We had ice cream.

"Dolly."

Final Drills.—All the garments were drawn on the board. The drill involved words, phrases, and sentences.

Those belonging to the shirt were put under the picture of the shirt, etc. These drills took a great variety of forms.

By the time the dolls were completely dressed and had presumably learned how to take care of their clothes, it became a very pressing problem for the teacher to find a way to take care of them during the long working out of the house-building project. The children loved them so that it looked as though they would be "played" completely out of existence before homes could be provided for them. Nor was it wise to put them away to lie until that time in a box or drawer, lest interest die. Even a nightly packing away in the only drawer available in the room involved much loss of time next morning in the sorting-out process. So several yards of elastic webbing were bought and cut into strips of appropriate size. Each of these was slipped through two vertical slits in a large sheet of cardboard and its ends sewed together on the wrong side, to make a band through which the doll could be slipped. The families, each on its own sheet, could easily be laid in the drawer at the close of the school day and stood up next morning on the window sill, in the chalk trough, or on the family tables, to watch and stimulate the progress of the building. A doll was taken out of its "life preserver" only when some especial need for measuring, etc., arose in the course of the building or furnishing, or when it became desirable to give one family or one child a special reward or "treat."

(d) Building Homes.—The idea had arisen, without need for even the most roundabout suggestion, that each family would house its own members, so work on the five homes was begun in an atmosphere full of interest and expectation. The children were taken out for a walk with the aim of seeing houses critically, noticing especially their general shape. In the meantime, thirty soap or canned

goods boxes were brought into the room. Six of these, of uniform size and shape, were given to each family, to form the skeleton structure of its house. The children were told that they might put the boxes together as they wished, but that it would be more interesting if no two houses were exactly alike. The result was five very different arrangements, each very attractive.

1. *General Plan* (*Room Arrangement*).—"What must a carpenter know before he can begin to build a house?" (The necessity for plans was developed.)

"What must the owner of the house tell the builder in order that the plans may be drawn?" ("How many rooms and how they are to be arranged.")

"How did the carpenter who built this schoolroom arrange to let light and air come into it and to let us get in and out?"

"Where will you put the windows and doors in your houses?" The families arranged their boxes and decided the position of windows and outside doors.

"How shall the dolls get from one room to another? How large must the doors be?" ("Large enough for the tallest doll to walk through." The dolls themselves were first used to measure the height; then rulers.)

The measuring of windows and doors on the boxes afforded a fine opportunity for drill in drawing straight lines with rulers, in measuring, in determining the spacing of openings on each side of the house and in each room. The cutting of these openings introduced the children to two new tools, the brace-and-bit and the saw. Each child did the sawing needed in one room of the house. The stronger boys helped the little girls, for whom this work was hard since the endboards of the boxes were so thick.

When the work on the houses began, the story of "This is the house that Jack built" was given to the children and worked out on the sand table. After it was

learned the children made their own story, based on this old folk tale:

"This is the house that the Healys own.
This is the carpenter who built the house that the Healys own.
This is the wood that the carpenter used to build the house, etc.
This is the pencil that marked the wood that the carpenter used to build the house, etc.
This is the ruler that helped the pencil that marked the wood, etc.
This is the line that was helped by the ruler that helped the pencil, etc.
This is the saw that sawed the line that was helped, etc.
This is the door that the saw cut out when it sawed the line, etc.
This is the nail that nailed the door that the saw cut out, etc.
This is the hammer that drove in the nail that nailed the door, etc."

All the things mentioned in this story were drawn around the room on the blackboard and the story was also illustrated more concretely by letting the children make the carpenter's tools out of plasticene.

2. *Inside Finish.*—The suggestion, "Look at the windows and doors in this room and then at those you have just made. How do they differ?" brought out the need for a finish, so the children set to work to measure, cut, and attach window and door frames, as well as surbases. This accomplished, the woodwork and the floors were carefully sandpapered in preparation for varnishing. Here again each child was responsible for one room in the house, the boxes having not yet been fastened together.

The time for papering the rooms had now come. To begin the development of good taste in wall papering, as well as to start the children in the use of brush and watercolors, a dealer's sample book was obtained. The children's choices were directed by such questions as:

"What kind of paper makes the room seem larger?" "What kind makes the ceilings seem higher?" "What colors make you feel cheerful?" "What colors make the room seem warmer?" "What colors would be likely to please most of our guests?" "Therefore, what shall we use in sitting room and dining room?"

Many of the children were very anxious to make gaily flowered wall paper. To give some outlet for expression in this direction and at the same time cultivate a taste for plain paper, they were asked, "How may we brighten these rooms and at the same time make them seem as large as possible?" (Use a flowered or figured or striped border.)

"What colors would you like in the bedrooms?"

"What in the kitchen and bathroom?" (Small-figured, so that spots may not show so readily.)

The children of each family made the final decision as to the colors for their own house. For practice in mixing the paints and handling the brush, every child made samples of the various colors, which were offered to the whole class for criticism. Stick printing on quadrille paper was used for borders and for bathroom and kitchen papers.

All the children helped to make paper for their house and every child papered one room. The child who produced the prettiest tint appropriate for a bedroom was chosen to paper this room, such adjustments as proved necessary being made in the case of the other rooms. Some very pretty tints were produced, as well as some very original designs in borders and in kitchen and bathroom papers. The schoolroom was transformed for the

time being into a paper-hanging establishment, each child fitting his paper around doors and windows and pasting it to the walls. This proved one of the most difficult tasks attempted, and the results were very crude. The problem, however, served its purpose.

3. *Outside Finish.*—The general appearance of the houses was far from satisfying the children. They proposed to paint them, but some of the boxes were marked with big black letters and bands of red paint, which it would have been impossible to cover without applying several coats. They had met a real difficulty and they set to work at once to overcome it. The teacher threw out a hint in the form of a question. "Do you all want your houses to be frame?" This was all that was needed to start a discussion as to the materials they had seen houses made of, and a consideration of ways and means of carrying out their desire to have no two houses on Good Children Street built of the same material. Finally, they decided that there should be one frame house nicely painted (the boxes composing this house not having been heavily marked), one brick house, one of cement, one of stone, and one a combination of frame and pebble-dash.

Since so many bricks were needed to cover the box-skeleton of a house, all the families helped to make bricks. Most of these were shaped by hand, but a few of the children made molds of bits of wood, into which they packed the clay. The bricks measured about 3 in. x 1½ x ¾. When the bricks had dried sufficiently, the children took them to a pottery nearby, where they were fired.

The families visited the Model Store to see how the second-graders had made the cement end-walls of the store building. While they were there, the teacher raised the question of how they could fasten their bricks and stones to the box-skeletons of the houses, since it was not practicable for them to build solid walls of brick or stone.

They easily caught the idea of nailing strips of wood along all edges, including windows and doors, and filling the enclosed areas with a very thin layer of cement, in which the bricks or stones might be embedded. Measuring, sawing, and nailing the ¾-in. x ½-in. strips used for this purpose gave another opportunity for reviewing these processes.

The bricks were brought from the kiln, painted red (since potter's clay, being very accessible, had been used instead of brick clay), and set in a bed of cement on the house wall. The stone house was made in the same way, using rather large stones, fitted together as closely as possible. For the pebble-dash, small pebbles were scattered in a thicker layer of cement. In the case of the cement house, the mixture was poured into the spaces needing it so as to fill them completely. When the shallow layer of cement used on the first houses had hardened, the children found to their great delight that the stones and bricks "stuck" very well and "the houses looked like real houses, excepting the roofs"; "and there are no doorsteps and porches;" and "the strips holding the cement and forming door and window frames ought to be painted." So these matters were attended to.

Three kinds of roof were used; two were covered with tar paper, two were shingled, and one was covered with tin and painted red. All the wood on the outside of the houses was painted, the color being a matter of family choice. The planning, constructing, and placing of the piazzas and porches formed another family project. Bricks, the lids of some of the house boxes, cigar and other small boxes, with spools or pieces of broomstick for columns, furnished the materials. The diverse results appear, to some extent, in the pictures of Good Children Street, which face this page and page 55.

GOOD CHILDREN STREET

THE FRAME AND PEBBLE-DASH HOUSE AND THE STONE HOUSE

While the houses were building there were many interesting reading lessons. For example:

"We are little carpenters,
Working day by day,
Making homes for dollies,
A place for them to stay."

They finally learned to read "This is the house that the Healeys owned," which had delighted them when they "built" it but which had been too long a story for them to master at the time it was put together. In the meanwhile it had been copied into the Family Books, and the teacher's occasional reading of it aloud had been considered a great treat.

There was a whole series of informational reading lessons built on the various materials used. The children were started on this track thus:

"Suppose the wood spoke to you about itself, what do you think it might say?"

"Take me," says the wood.

"I lived in the forest.

"I was one of those large, large trees.

"Men chopped me down.

"They carried me to the sawmill.

"There I was cut into pieces.

"Now I am smooth and even.

"I am called boards.

"Use me for your house."

Lessons about the other materials are given in the Appendix.

An interesting drill was begun by drawing the outlines of several houses upon the board. "I have some houses here which I want filled in with bricks. Let's play that each word on the chart is a brick. I will point to a word

and if you can tell me what it is, I'll write it on the house. Let us see how many houses we can finish to-day."

4. Sanitary Fixtures.—After roofs, piazzas, and outside painting were finished, the teacher suggested that the families had better "inspect" the houses to see whether they were completed inside and ready for furnishing.

"Why, no! The bathroom isn't finished." "And the kitchen hasn't a sink in it." "Nor tubs."

Then the assignment was made. "Look at home and decide by to-morrow how to make the things we need for kitchen and bathroom. Bring pictures of bathrooms. Where can you find these?" ("In the magazines." "My father works at Maddock's, and he can give me some of their ads.")

The problem worked out into having each child-member of a family make one of the six pieces of pottery needed—bathtub, lavatory, toilet seat, kitchen sink, and two laundry tubs. These were modeled first in plasticene, in order to discover the methods each one had in mind and to establish proper sizes. Each family decided, after inspecting these models, which of its members should make each piece and laid down in an informal way certain specifications. They were fired when finished and then coated with shellac to make them sufficiently waterproof for such use as they would receive. The family producing the best bathroom fixtures was rewarded by receiving tiles to make the floor of their bathroom, the teacher happening to have a few of the tiny porcelain discs such as are set in plaster to form "real" bathroom floors.

Finding the cost of the house after they were finished, so that the first-grade families might know what to charge the doll families who were waiting to buy or rent a home, was an important piece of business. It involved arithmetical operations which most of the children couldn't perform; but there were two or three especially quick at

figures and here was an opportunity for them to make a special contribution. They helped work out the prices for each house.

Cost of boxes	60 cts.
Cost of bricks	30 cts.
	90 cts.
Cost of cement	35 cts.
Cost of stones	42 cts.
	77 cts.
Cost of wood for outside finish	34 cts.
Cost of window and door frames, etc.	45 cts.
	79 cts.
Cost of papering	64 cts.
Cost of painting	31 cts.
	95 cts.
Cost of bathtub, etc.	90 cts.
Cost of kitchen tubs	70 cts.
	160 cts.
Cost of all *	90 cts.
	77 cts.
	79 cts.
	95 cts.
	160 cts.
	501 cts.

(Five dollars and one cent)

The student teacher who handled the house-building project, being unable to find a story appropriate for her purpose, made one called "The Tool Family."

Once upon a time there was a family that lived near the woods, called the Tool Family. There were Hammer Tool, Saw Tool, Axe Tool, Plane Tool, Nail Tool, Father,

* Here the teacher helped.

Mother, and Alice. One day Alice said, "Oh, I wish I had a little house for my doll. Kathryn has one for hers."

Brother Axe looked at her and said, "Well, keep on wishing and maybe a kind fairy will bring you one some fine day."

That night, after Alice went to bed, Axe said to his brothers, "Why can't we build her a little house for her doll? We can all help." So they agreed to help build the little house for Alice's birthday.

Axe Tool went to the forest and cut down a tree.

Saw Tool sawed it into boards.

Plane Tool made the boards smooth.

Nail Tool called in a lot of his friends to help him hold the boards together.

Hammer Tool put in the nails.

Father was the contractor.

Mother furnished the house.

And Alice jumped for joy when she saw it on the morning of her birthday.

The children so enjoyed this story that they begged for another. The teacher told them that she had just made this story up, whereupon a child said, "I can make one up, too." He tried, and after he had made some vain attempts to get "the right start" the teacher said, "Suppose we all make a story together. Who shall begin?" The children chorused, "You!" This was the story:

Many little wood brownies were asleep in a dark room. It was very quiet. Every one was as still as he could be. Suddenly the door opened. "Whom do I hear?" whispered one sleepy little brownie. "Oh," he cried joyously, in a minute, "it is the carpenter giant." Then all the other little brownies jumped up and laughed with delight. (The children here took up the story.)

"Why are you little brownies so happy?" said the giant.

"Oh, we are going to be made into beautiful furniture, we are! we are! we are!"

The carpenter giant began to rattle his tools and get ready to work.

"Please make me into a chair," said a wee little brownie.

"Make me into a table," said another brownie.

"Make me into a sideboard," said another brownie.

"Make me into a bed," said another brownie.

The carpenter giant worked and worked. At the end of his long, busy day he proudly looked at the fine furniture he had made. (The teacher continued.)

And what do you think he heard? Every brownie that lived in those pieces of furniture sang:

"We are all so happy and glad,
Happy and glad,
Happy and glad,
We are all so happy and glad,
Now that we are made.
We will make the families sing,
Families sing,
Families sing,
We will make the families sing,
When the bills are paid."

(e) Furnishing the Houses.—The way for this project had been well paved by the wood brownies story, and the children took it up with the greatest interest. In order to have them learn what furniture is usually put into each room in the house, a series of reading lessons was worked out, beginning with:

"Please furnish me," says the kitchen.

"I need only a stove, a table, and a chair.

"You have already made my sink and my tubs."

For drill on these lessons, a large van was sketched on the board, and the class played "Moving Day." The van was filled with "furniture" (words). "Who wants

to help get things out so that the driver may load up again?", etc.

The actual making of the furniture was preceded by a visit from some of the proud cabinet makers of second grade, who had been working for some weeks on a complete set of furniture for one house, and who now came to set it in place, to get the whole effect. The first-grade children were very greatly pleased and asked at once whether they might not "buy" it. But the delegation said that it was to be a gift from the Model Store to their very good customers, the families of the first grade.

"But it isn't fair to put all the furniture in one house," soon came from the children. Then the principle of apportionment had to be decided. All sorts of suggestions were made by the children. The supervisor finally proposed that the family that had helped most by learning to read well all the house-building lessons should have first choice of a set of furniture for one room, the next best having second choice, etc. This involved a test, and as a meeting of the critic teachers under whom the state practice teaching was in progress had been called for that week, it was decided to use this test and the awarding of the prizes as a sample of the kind of work that was being done in this triple inter-grade experiment. The victors chose the sitting room furniture, which included even a piano!

These little sets of furniture, which were really remarkably well made considering the age of the workmen, not only gave the first-graders ideas for their own work but set a standard which they worked hard to attain and which was much more valuable than could have been furnished by the machine perfection of ordinary toy furniture.

Each family then had to make four sets to complete the furnishing of their home. The leaders developed very soon, though every child "did his bit." The furniture was very simply constructed out of thin strips of soft

wood, of varying width, which the children cut into the required lengths. The families planned the details and were given entire freedom to try out their plans. They frequently sought help, and at such times it was freely given. The results were crude, of course, but considering that the children did their own measuring, sawing, sandpapering, and nailing, they were fairly satisfactory. The painting of the furniture followed the construction of the pieces. The children chose the kind of paint they wanted. For the most part, they selected mission brown stain for sitting room, a dark blue for dining room, white or buff for bedrooms, and white for the kitchen.

When she was ready for the furniture drill work, the teacher said, "A sale to-day! I'm going to see how much you can buy. I'm selling furniture, or words that belong to the furnishing of our houses."

The charts containing the reading material on furniture were brought forward and the heading, "Articles Sold," written high on the board. Then words were rapidly "sold" by the child's pronouncing them as fast as the teacher pointed to them, the teacher then writing the word under the heading and putting the purchaser's name after the word, to permit scoring. After the drill was started, children were allowed to be salesmen as well as buyers. The teacher left the list on the board, saying, "To-morrow we'll buy the house. Think of a game you'd like to play with the house and these words." Next day a child suggested, "Moving into the house," and the furniture-words were written in the proper rooms of the house which was rapidly sketched on the board. Later, the game, "Cleaning house," was suggested and played with great enthusiasm. The furniture was all taken out and then put back again. The best cleaners were those children who took out or put back, *i.e.*, recognized and pronounced carefully, the most words.

(f) Going to Housekeeping.—The families now moved in and played "going to housekeeping," having decided that they could finish "fixing up" while living in the house. The children took great delight in placing the furniture and putting the dolls in their new homes, and the cardboard easels, with their elastic "life-preservers," were permanently retired.

For a time little "regular" work was done, the children being so eager to play with their dolls. They were allowed to do this and a good deal of incidental teaching of good manners and gentle living was accomplished.

1. *Getting Settled.*—While the interest still ran high, attention was called to the fact that several more things were needed to make the little families completely comfortable and happy in their new homes, and a list of these essentials was made—rugs, curtains, pictures, gardens.

There was not time enough left to undertake the making of all these, so the children were allowed to decide whether they would buy the rugs or the curtains. Having seen the Carpet Department of the Model Store, they wanted to buy rugs. The dolls were taken to the store to have a voice in the choosing. Woven silk rag rugs were selected for sitting room and bedroom floors; braided raffia for kitchen and bath. At the same time curtain material was bought and the measuring of windows (another review) was followed by the measuring, cutting and sewing of the curtains.

The final finishing touches were put on the new house by the selection of pictures to adorn the walls. For this purpose the tiny Brown pictures were purchased by the teacher. Selections were made from the hundred subjects put before the children, after some study of the appropriateness of the picture that the child liked to the room for which he wanted it. The main purpose in the teacher's mind, however, was to bring the children into

contact with many of the good pictures which they ought to love throughout their lives, and thus to begin early the development of taste in the selection of pictures for homes. These little bits of real art were mounted and put into the gray, brown, and black cardboard frames which the children made. Each family had the pleasure of hanging the pictures as soon as the framing was completed.

During this picture study the children began to illustrate their own Family Books. This work was initiated by one child, before the teacher had even conceived the idea. Being deeply interested in the pictures in the little readers which the children were allowed to take from the closet whenever they had finished the task in hand, he said one day, in a very wistful tone, "I'd like to read my Family Book much more if it had pictures in it." The supervisor responded by saying, "Well, you helped to make the book; why didn't you make pictures?" Thereupon the children began a careful re-reading of the stories —the finest kind of review—for the purpose of deciding upon a method of illustrating them. Unfortunately the student teacher then in charge accepted anything a child offered in the way of a picture, instead of holding him to the standard of his best work, so the actual outcome of the project was poor; but it has great possibilities.

2. Making Gardens.—By the time the children were ready to consider gardens for their doll homes, the spring was so far advanced that the school gardens were calling for laborers, so it was decided to say that these outdoor plots belonged to the doll families. Hence the projecting front part of the platform on which the houses of Good Children Street stood was merely covered with green crepe paper instead of being converted into a shallow, water-tight box filled with earth and planted with grass or some other quick-growing seed.

The plot assigned to first grade in the school garden

was divided into five portions, one for each family. A circular bed in the center of each was filled with flowers, verbenas for one family, petunias for another, etc. Around these flower beds, vegetables were planted. The little families worked faithfully, hoeing and weeding, for each was ambitious to have its garden pronounced the best of the five, not to speak of their hope to do better than second or even third grade.

3. *Family Life.*—While the dolls' houses were being built and furnished, the details of family life were being further worked out in club meetings and family gatherings, for "the dolls must be taught how to live nicely in their fine new homes." This is where a set of play furniture, large enough for the children themselves to use, would have been very helpful, for many of the children had no standards of refined or even healthful living set at home.

The use of each room formed the substance of an interesting series of reading material. The desire to do something in return for the many kindnesses of third grade motivated a number of lessons on the sitting room and the dining room. Their latest gift was a beautiful complete tea set, which they had made and decorated especially for the first grade to use. So the families decided to entertain third grade at a tea party. To practice for this great event, first one family and then another entertained the other four. "Now what must a family know in order to be good hosts—in order to make their guests want to come again?" "They must know how to receive company, what to talk about, what can be done to entertain guests."

Such questions as the following were answered by playing out the situations: "What shall the *children* do when the company is brought into the sitting room?" "Who should have the most comfortable seat?" "How shall we use our voices?" ("Loud enough for the caller

to hear, but not too loud." "Do not interrupt when others are speaking," etc.)

Here is one of the lessons as it actually worked out.

A knock is heard at the door. Father goes to open it.

Father—"How do you do? Come in. I am very glad to see you."

Company—"How do you do?"

Father—"Won't you sit down?"

Mother—"Isn't this a fine day? We are having such good weather and our garden is growing finely." (The children's interest in their school garden at this time was keen, so they talked a great deal about it.)

Child—"Yes, we have already had radishes from our school garden." (The conversation lagged here.)

Teacher—"Perhaps our callers would like to know more about our school garden."

Another Child—"You see, we have five school gardens, for each family has one of its own." (Another gap.)

Teacher—"The company might think we do nothing but garden work at school."

Third Child—"We do other things at school, too."

Fourth Child—"We read, write, make bills, buy at the store, make houses and furniture, sing, and tell stories."

Father—"Would you like to hear someone sing? My daughter Hannah will sing for you, and play the piano, too." (Hannah, who was the leader of the grade in this work and dearly loved to imitate "playing the piano," sang several solos.)

Company—"David, won't you get your violin and play with Hannah?" (David stepped forward and imitated playing a violin accompaniment.)

Hannah (singing):

"Wish I had a tiny little fiddle.
I would hold it underneath my chin.
Then I'd take my fiddle bow—
I could play a tune I know—
I'd bow to the ladies and then I'd begin:

'Teedle, teedle, teedle, dum, dum, dum;
Teedle, teedle, teedle, dee;
Teedle, teedle, teedle, dum, dum, dum,
Teedle, teedle, teedle, dee.'"

Mother—"Let's have a story."

(First one child, then another, told a story—"Little Boy Blue," etc.)

Mother—"Now come out into the dining room and have a cup of tea."

(Mother pours tea—water for this rehearsal—and the children serve the guests, two carrying the cups, another following with cream and sugar, and the fourth carrying a plate of cookies. After drinking the tea, they all go out on the piazza, and the party breaks up.)

Frequent playing out of entertaining—conversation and performance being changed each time—gave the children ideas of good manners which seemed to function throughout their life in school together. This grade, though made up largely of the "scum of society," the children of a low class of foreign laborers as well as those of the poorest class of native Americans, had a fine reputation for behavior during the whole year; the writer cannot recall a single instance of serious disciplinary difficulty.

A bathroom lesson was handled as follows:

The student teacher told this story to the children:

Once upon a time there was a little room called the bathroom.

The things in it when they were left alone talked to one another.

Let us try to hear what they say.

The bathtub speaks to the splashing water:

"Oh, hot water, what makes you steam so much?"

"I am the water that makes you clean.

My friend, Mr. Soap, helps me.

Mr. Cold Water sometimes must help me, too, so that my little friends will not burn themselves."

The little soldier toothbrushes that stand in a row often speak. Listen to them:

"Here we stand, six little toothbrushes all in a row.
Yesterday we were very unhappy.
Do you know why?
Our little friend Mary took the one of us that belongs to her and, after using him, she let him lie on the washstand.
Oh, how lonesome that little brush was!
To-day he was put in his proper place.
This is what he said to us: 'I am so glad! I was afraid I'd never get back to you again.'"

Two little brushes said, "That was not as bad as the dreadful thing that happened to us to-day. We were not used *at all!* Boo-hoo! Boo-hoo!"

"Oh!" cried the great, big, rough bathtowel, "I want to go home! Little Johnny came and dried his hands on me, and just see where he left me! He threw me right on this little chair. This is not my place. You know where I belong, don't you?"

All the other towels cried, "On the rack! on the rack! That's the only place for you."

And do you know, children, one day the whole bathroom planned a little chorus. Every one could sing. The bathtub was the leader. This is what they sang:

"Oh, always treat us kindly,
Oh, always make us glad.
Put us in our places,
Never make us sad.

We want to be your helpers,
We want to be your friends,
But if you throw us on the floor,
Our love for you soon ends."

This story delighted the children and they loved to put their dolls in the bathroom and tell them how to keep it in order. At the same time the importance of bath-

ing and of keeping teeth, clothing, and homes clean was stressed.

It became the duty of each family to attend to these matters among its members. Each morning there was an inspection of hands, nails, teeth, hair, and handkerchiefs. At first this was done by the mother. Later the families in joint assembly elected a district nurse, who served for a week, making a daily call on each family.

One mother told the supervisor that her little girl not only insisted on having a clean handkerchief but wanted to go to the mother's box for a pretty handkerchief. "She won't think of using a handkerchief with even the tiniest hole in it," said the mother. And many of the mothers spoke of the regularity with which their children brushed their teeth.

On one occasion tidy Alice was seen off in a corner of the schoolroom, braiding the hair of Elizabeth, a careless little Italian child, "because everybody in the family but her was neat and clean." Alice was the mother and Elizabeth the little sister in the Horn family.

(a) ACTIVITIES OF THE DAY.—Rising, bathing, dressing, breakfasting, and packing lunch for father and big brother were played out. Other activities will suggest themselves to the wide-awake teacher. Wherever possible, Mother Goose material and well-known activity songs, such as "This is the way we wash our clothes," were used. The reading hour soon became a favorite period in the day and was seldom omitted. Posters and advertisements from the Model Store and alphabet and number-rhyme books made by the second grade for the families furnished some of the material for these readings.

The music and game work proved a close rival of the reading in holding the children's interest. Much of the singing consisted of lullabies and Mother Goose melodies,

and was strongly motivated, since music was needed for most of the activities. There were sewing and sawing songs, painting and papering songs, songs for the holiday celebrations and for other entertainments, as well as songs just for the sake of giving expression to feeling.

The physical education work was just as strongly motivated. No formal exercises were needed. All this work took the form of dances, games, or free play, both out of doors and in doors, *supplementing the physical activity involved in almost every phase of the school work.*

(b) A WEEK WITH EACH FAMILY.—After each family had worked out a week's program of activities, a "coming together" meeting was planned, to which guests were bidden, who were to be asked to decide with which family they would prefer to spend a week. This unit of work was conducted under a heavy handicap, for the supervisor was unable to carry out her desire to have a set of play furniture for a sitting room, a dining room, a kitchen, and a bedroom, large enough to fit the children. The making of this would have been an ideal problem for the industrial art work of one of the upper grades or for a shop class of the Normal School students. But it proved impossible to arrange this, or even to finance the making of the most essential pieces of this furniture by a local cabinet maker. So this playing out of family activities had to be carried on largely with imaginary properties, the only "real" things used being some chairs which the third grade had made for the inter-grade workroom, the tea set made by the same grade, and a table loaned by the kindergarten—no bed, no bureau, no sideboard, no rocking or arm chair.

(c) SPECIAL DAYS OR EVENTS IN THE FAMILY LIFE. —Some of these have already been considered in the preceding pages, *i.e.*, the millinery opening at the Model Store (page 43), the Christmas party given by first grade to

second and third (page 44), the tea party given by first grade to third grade (page 64).

The celebrations of patriotic birthdays and other holidays were usually inter-grade affairs. On Columbus Day the story was told in each room before the children went up to the auditorium to see the pageant given by the Normal School students. Hallowe'en was an occasion of pure fun. At Thanksgiving, as at Easter time, there were special songs and stories. For New Year's Day the children learned the poem, "I am the little New Year." Valentines were made beforehand in each room for the children of all three grades, the jingles as well as the pictures being home-made. A leading feature of the joint party was the reading of these jingles, which followed the victrola concert. Arbor Day and Memorial Day were celebrated by the whole school, the latter on the banks of the Delaware, on whose waters flowers were cast in honor of our soldier and sailor dead, in France or on the seas between.

As for the family recreations which had been planned for the year, a trip was made to Cadwalader Park in the late fall, to gather leaves and flowers and to see the sheep (in connection with the study of wool). The winter brought too little snow and ice to stage the coasting and skating trips, so these had to be imaginary, like the fishing trip, which was crowded out by the influenza in the fall and by the consequent congestion of the program in the spring. "A week in the country" was also imagined, when country life was worked out on the sand table. All these recreations, indeed, furnish interesting sand-table projects.

Trips to art gallery and museum were not taken, since the call for such trips should come from some phase of the curriculum; and in this case much of their purpose was served, and time was conserved, by having certain mate-

rials brought to the school from the museum, and by the use of the little pictures described on page 62. When the circus visited Trenton, the children staged and played a circus on the sand table. Music lessons and the school victrola were used in playing going to concerts.

It had been the intention to entertain the parents of the children frequently, to insure understanding and co-operation, but the many school duties of the supervisor outside of this curriculum crowded out this valuable phase of the school life, except for the inter-grade Mothers' Party which followed the closing pageant.

(g) **A Family Reunion.**—This last unit of the curriculum—a dramatized summary of the year's work—became a part of the pageant which was given by the three grades. In order to make apparent the part it played in the whole, it is not described here, but is given in its setting, as it were, at the end of the account of the third-grade curriculum (page 132).

III. SECOND GRADE MAJOR PROJECT—PLAYING STORE

This project having been launched by the supervisor in her first visit after the reopening of schools at the end of October (see page 18), the student teacher took it up the next day.

"Of course you remember what you decided on yesterday as your work for the year." "Why did you choose this work?" "Which grade do you think will need your help more frequently?" "What is the first thing they'll need for playing family?" ("Dolls.") "How will they get these?" "After making or buying the dolls for their families, what must they then have?" ("Clothes.") "How can they get all these things?" "Where does your mother get the things the family wear?" "Can the first grade make all the dolls' clothes?" "How can we help them?" ("Sell ready-

made clothes in our store, as well as materials.") "Will playing family require anything but dolls and their clothes?"

"Look about your house to-night and be able to tell to-morrow what a store should have in order to be able to supply the needs of a family."

The following day the question, "What kind of store shall we have?" introduced a lively discussion which was guided by the reports on the assignment. The list of articles needed for family life was put on the board and then classified. In this classification the necessity for a store of the department type became evident. The development of the idea was helped in this way: "If your mother had a good deal of shopping to do in Philadelphia, to what sort of store would she probably go? Suppose, for instance, she wanted to buy shoes, a coat, a new desk, a rug, and some pins, and she had only a little time in which to do it, where would she go?" (Most of the children had gone to Philadelphia with their mothers and had visited the Wanamaker store.)

"If she were going to do this shopping in Trenton, where would she go?" ("Dunham's, or Kaufman's.")

"Why wouldn't she go to Manning's?" (This is a furniture house.)

"What do we call a big store like Dunham's or Kaufman's, where all kinds of things are sold?" "What kind of store will be most convenient for our customers?"

"I should like each one to try to decide on the best way to play department store. Think it over to-night, and let us hear from you to-morrow."

Next morning ways and means were suggested, but the discussion was very rambling, details of stocking, managing, selling, being given promiscuously, till one child suggested that we were planning what to sell and how to sell before we had a place in which to put the

things. This was taken as a great joke, and the class immediately dropped all the imaginary stocking of the store and started to make plans for the store itself.

1. *How Shall the Store be Built?*—Questions of materials to be used, of ways of putting these materials together, of size, of number of rooms or departments, were discussed and the following decisions formulated: (*a*) that a visit downtown to see the two chief department stores was necessary; (*b*) that the size of our store must depend on the space available in the room rather than on the number of rooms or departments necessary; (*c*) that if lack of space made it necessary, the departments for which there was no longer a demand might be discontinued when a need developed for other departments; (*d*) that the material had better be wood (box construction) with a brick foundation and chimney, and "a waterproof roof."

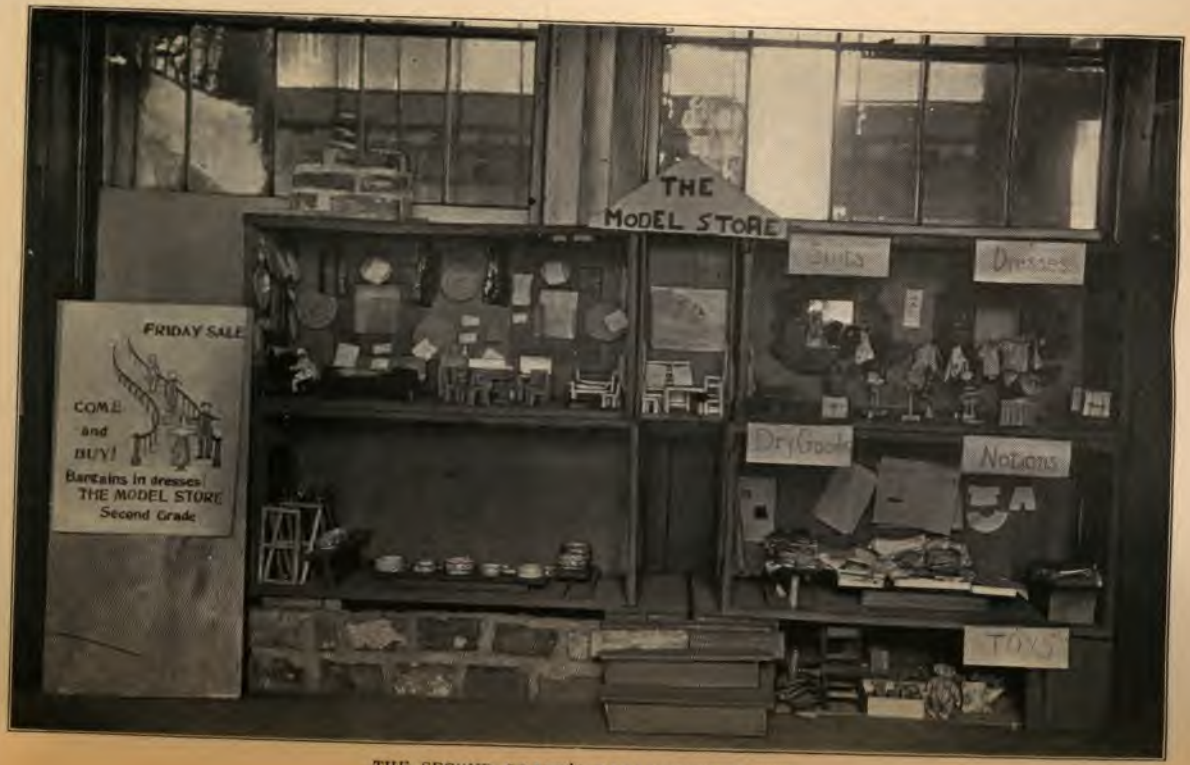
(a) **General Plan.**—Victrola boxes were suggested, since they are "so large and so smooth." So four of these were procured and building was begun. The boxes were used with their longest dimension parallel with the floor; two were placed end to end and supported on three soap boxes so as to make them more accessible. Since there was space enough, the contiguous ends of the victrola boxes were left as far apart as the size of the middle foundation box permitted, thus forming an entrance or vestibule. When the other two victrola boxes were laid on top of the first to form the second story, the space between formed a small room to house any department whose stock was not large. But this space had neither floor nor ceiling! To remedy this, the upper boxes were drawn a trifle farther apart, so that a narrow box, set in on end, was supported on the projecting edges of the lower victrola boxes. (See picture opposite page 74.)

The children carried in "real" bricks for foundation

and chimney. They mixed the cement which they used as mortar, some boys from third grade being called in to teach them this process. After finishing one-half of the foundation, *i.e.,* setting bricks to hide the supporting boxes and to fill the space between them, it suddenly dawned on one child that if they put the bricks under the entire edge of the building, they would lose the use of that space, which might house goods "just like Kaufman's basement." So the children decided that they must sacrifice the pleasure of more brick-laying and a part of the realism of the structure, for the sake of keeping some of their stock in the basement and being able to display it, as well as to get at it when customers appeared.

There were two very good reasons why the children did not make their own bricks. First, it was not possible to secure enough clay without great delay and expense; second, they couldn't afford the time needed to make them, even if they could wait till the clay came, since a whole month of work had been lost by the closing of the school during the epidemic of influenza. Even had these facts not been apparent to the children, the teacher would have encouraged the use of real bricks; (1) because the making of bricks is one of the first-grade experiences in the curriculum now under consideration and the work is necessarily repeated on a much larger scale in the third-grade project, so that time may be more profitably spent in the second grade on other things; (2) because the possibility of handling "the real thing" in this larger construction makes it wise to do so.

When the chimney was begun, it was found that the side of the box was not strong enough to support it, so a heavier board was laid across underneath the hollow square of bricks. Other boards, parts of soap and canned goods boxes which the children dissected, were used to build steps leading up to the vestibule. The children



THE SECOND GRADE'S DEPARTMENT STORE

themselves planned these, sawing the side pieces and fitting the rises and treads on them.

The waterproof roof which had been specified originally by one of the children was constructed by one group, while others were working on the steps and the brickwork. The central box was a trifle higher than the large boxes, and the class decided to cover this ugly jog and "make it look more like a real store" by building up a pointed gable roof over this part. Then the whole was covered with real tar-roofing paper.

"What a fine place to put the name of the store!" cried one of the roofmakers, pointing to the triangular space over the entrance. There had been a very animated discussion a little earlier than this of various names that had been proposed for this business enterprise. It so happened that the wing of the Normal School building which housed the Training School had been the home for many years of a somewhat similar institution called the Model School, this part of the building being still called the Model wing. The street which leads up to the campus opposite the front door of this wing is named Model Avenue. So the majority of the children, living in this neighborhood, wanted to call their store "The Model Store," and the name can be plainly seen in the picture facing page 74.

(b) **Outside Finish.**—Victrola boxes being made of very thin boards set on the *inside* of a heavy framework, their outer surfaces are recessed, or depressed, within a heavy rim. These depressions in the surfaces of the boxes forming the end walls of the store were filled in with cement, in which pebbles were set before it hardened to give the effect of pebble-dash construction. Then all the outside woodwork was painted green. Before the cement finish was thought of, windows had been sawed in the end walls, and panes of glass fastened in with

putty. It became a very difficult problem to keep the cement from overflowing these windows, since it was too late to put on raised frames without breaking the glass. The teacher helped the children by suggestions and in the carrying out of the suggestions, but left the responsibility on their shoulders. Another year she would probably try to have the children foresee this difficulty; but if there had not already been enough unanticipated difficulties met to give abundant opportunity to provoke thought, she can imagine herself allowing the children to meet this one again. For it is quite conceivable that a curriculum of this sort, if too carefully elaborated and formulated, may in time become as stereotyped, as deadening to initiative, as the most formal curriculum of the old type.

(c) **Inside Finish.**—The problem of interior finish for the store was easily solved, because the boxes were so smooth. The children all helped to paint the walls an attractive tan color and to varnish the floor. This color scheme seeming rather somber after the work was done, one child suggested putting a border around the walls. This became the fine arts problem. All the children made designs, the best being selected by class vote. Every child had a chance to help in the making of this border after the design was adopted; one group measured and cut the strips of paper; one tinted these strips; one cut the design as a stencil in stiff cardboard; one applied the pattern to the strips.

About the time the border was ready to be hung, the oil from the putty was beginning to stain the walls around the windows. This greatly grieved the children and various remedies were proposed, and rejected. Finally one of the girls suggested that the border might be put around the windows to cover the spots instead of just under the ceiling, for it would brighten the interior just as much in this position, if not more. Accordingly this

was done. But alas, the oil gradually made its way through the border and finally spread far beyond it, as is shown in the picture. The damage proved to be beyond remedy, and the children had to submit to the inevitable.

The work on this building introduced these children to materials, tools, and processes which they had never before met. For pupils who had lived through the first-grade family life, this phase of the project would have been in the main a review, but with enough new features to make the work none the less enjoyable and profitable.

An interesting and valuable feature of the painting of the store was an introduction of the children to some of the materials used in making paint. The student teacher began this by telling "The story of this can of paint."

"I was made in a large factory. Some men mixed linseed oil, which is pressed out of the seeds of the flax plant, with the kind of powder which gave me the color they wanted me to be. I think this coloring matter has a queer name, don't you? It is called pigment. My pigment is brown.

"After the oil and the pigment were mixed, I had to have something to help stiffen me. This was a smooth, white, gummy substance, which looks like the inside of marshmallows. It is called white lead. This braced me up and made me anxious to come to you. But I had to wait long enough to have some turpentine put into me, to make me dry quickly.

"Then the men poured me into my can, and with hundreds of other cans which were going to paint other stores and houses and wagons and many more things, I traveled from the factory to the paint store where Mr. Clark bought me.

"When he brought me to you, I heard him tell you something which I hope you'll think of every time you use me. 'Don't put too much paint on your brush at a

time, and '—well, I couldn't quite hear what else he said, but I guess *you* know, so I'll leave this for you to finish."

This mode of ending the story gave the teacher an opportunity to have the children build up other rules for the correct use of paint.

(d) **The Show Windows.**—The fine arts work while the store was building consisted mainly of making a poster, about five feet long by two feet wide, representing two large show windows, to be put up so as to cover the lower portion of the glassed partition separating the room from the hall. This was made partly as a decoration for the hall but mainly for advertising purposes. The windows were drawn and their frames, as well as a part of the store front which was also represented, were appropriately colored. Each child helped in this work. Separate pictures of the goods to be displayed were drawn, colored, cut out, and very lightly pasted in place, so that the windows could be re-dressed from time to time, as new departments were opened. Patterns or models were drawn, colored, and cut out by all, the best being selected for display. The coloring was done with crayola. (See picture opposite.)

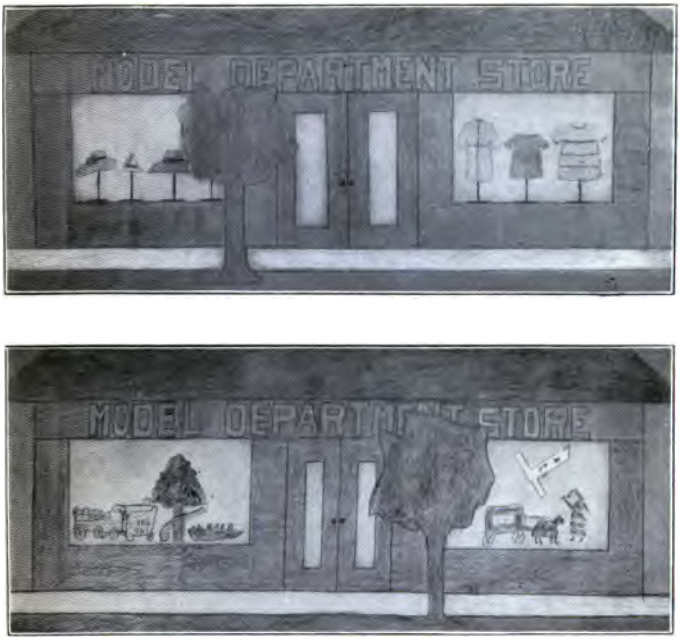
2. Suspension of Activities for Thanksgiving.—It now became necessary to concentrate on the preparations for Thanksgiving Day, which was fast approaching. The readings and stories of the English work reflected the coming event.

(a) **The Second Grade's Contribution.**—A Thanksgiving celebration for the first three grades was planned. It was agreed that second grade was to tell the other grades:

(a') Why our government sets a day apart for thanksgiving.

(b') What are some of the things that the whole nation is thankful for.

(c') What children have to be thankful for.



THE STORE WINDOW POSTER

(*d'*) How each one can help to make the big "Thank you" of the whole world more real.

The children made Thanksgiving postcards for first and for third grade. This was to be their "surprise" for the party.

(b) Organization of an Indian Tribe in the Grade.— Through the story of the first Thanksgiving Day in this country, the children were introduced to the Indians, and in a short time the second grade was deep in the absorbing project of playing Assunpink tribe. This interest ran parallel with the store interest, and did not become linked with it till near the close of the year. Then a child suggested putting the bows and arrows, the little canoes, and other things which the children had made as Indians, into the store. These things had been made as the Indian life was developed and the tribal home established on the sand table.

In all of this work, the children, instead of being told and then telling about the Indians, organized themselves into a tribe and actually lived through many of the experiences of these primitive people. Having learned that the creek running through the part of Trenton where most of the children lived had received its name from an Indian tribe that lived there many years ago, they decided to adopt this name for their tribe, living now near the banks of this creek.

In the decoration of their pottery, the children devised and used what they called the Assunpink design, which was really the conventionalized representation of the winding creek, thus . They made a variety of interesting adaptations of this motif. This was their introduction to the idea, as well as the application, of a unit or motif in applied design.

Each child took an Indian name and during the meetings of the Council and the working out of the other significant phases of tribal life, they called one another by these names: Shooting Star, Blazing Comet, Brave Heart, Shining Eyes, etc. The Indian work was usually conducted in a circle. Tools and implements, clothes, homes, boats, dishes, food, were thus worked out.

The chief was responsible for the reading of the tribe. The class at this time read with the greatest interest "Red Feather," "Mewanee," and parts of "Hiawatha," as well as all the Indian stories they could find in the other books of the school library, so as to find out about other Indians and thus learn how to do certain things as the necessity arose for them in the life of the Assunpink tribe.

3. Installing the Departments.—The building was ready at last to be stocked. The children were most eager to begin this work. The following list of desirable departments was worked out by the class:

1. Dry goods (cotton, linen, wool, silk).
2. Millinery.
3. Ready-made garments.
4. Boots and shoes.
5. Notions.
6. Carpets and rugs.
7. Furniture.
8. China.
9. Curtains and bedding.
10. Groceries.
11. Seeds and plants.
12. Candy and soda water.
13. Books and stationery.
14. Pictures.
15. Toys and games.
16. Housefurnishings.
17. Indian Department (added later).

(a) Dry Goods Department.—The class voted that this department be started first, because it would be the earliest to be drawn upon by the first-grade families. The work to be done in fitting up this department fell under the following heads:

1. How shall we get the dry goods?
2. What kinds shall we get?
3. How shall we arrange them in the store?
4. Who shall be the salesmen?
5. How shall we interest others in this department?

1. PROVIDING THE STOCK.—The children set out at once to get the materials. They brought from home and they wrote notes asking the help of the Normal students and of the domestic arts department of the Normal School. The stock having been gathered in, the sorting process began. In order to classify the miscellaneous collection the children had to learn to distinguish cotton cloth, linen, wool, silk, satin, and velvet. This led to a brief study of each fabric. For use "in the trade," sample books were made; and in these were shown by picture or writing something of the origin of the cloth and the uses to which it is commonly put, along with the samples. Before making these books, the children visited the museum in the State Capitol, so that they might get ideas from the charts on display there.

On the sand table the class developed, as each fabric was studied, a cotton field, a sheep farm, a flax field, a silkworm farm. At this time the stories for the Store Reader which the grade decided to make—not to be behind first grade—began to be told: "The cotton baby speaks." "What Johnny heard his woolen coat say." "The silk dress splits at a party." "The linen tablecloth surprises the family at dinner." "The bowl's story." (See Appendix, page 304.)

Before the dry goods department was fully arranged, rumors reached the ears of the merchants that the first grade would need rulers to measure their dolls before they could decide how much material to buy for their clothes. Here was the teacher's opportunity to secure some accurate measuring and cutting. Strips of cardboard one foot

long and one inch wide were measured off and cut. The very careful measurement called for in marking the inches (in red ink) and the half inches (in black ink) was an excellent preparation for the remaining work on the stock of dry goods.

When the sorting of the materials which had been gathered was finished, each kind of cloth was cut into strips of uniform width (being made as wide as the scraps contributed would allow). These were then measured and each kind wrapped on a cardboard bolt. These oblong pieces of cardboard had been cut of several sizes, to suit the various widths of goods. On the end of each was written the quantity in inches and the price per inch of the material it held. The determination of price called for judgment of quality, comparison with store samples and prices, etc.

The need for making counters arose as soon as the bolts of goods were ready to be placed. This was done entirely by the children, who were always eager for this type of work and did it very well. Two strips of wood were nailed to the floor with a narrow space between them. T-shaped counters were nailed together, the strip of wood used for the upright being just thick enough to slide snugly into this groove. If this counter proved superfluous in the later use of this floor-space for some other department, it was very easily slid or lifted out of the groove for the time being. (See picture facing page 74.)

2. CHOOSING MANAGERS AND SALESMEN.—The next question of importance was the selection of the personnel of this department. These qualities were decided upon as essentials for the manager:

1. "Good worker."
2. "Likes his business."
3. "Writes well."
4. "Reads well."
5. "Speaks well."
6. "Is kind to his workers."
7. "Is honest."

These standards having been established, the position was left open to give each member of the class a chance to show his fitness. "Fitness" meant high attainment in reading, writing, arithmetic, behavior, business knowledge, etc. Salesmen were chosen at the same time, the requisite qualifications being:

1. "Attends to business."
2. "Knows his stock well."
3. "Is polite."
4. "Is good in number work."
5. "Is honest."

The choice of salesmen was deferred in the same way as that of manager. Such rivalries as these, as successive opportunities for office developed, became a most effective disciplinary agency.

3. PUBLICITY WORK.—Advertising the store naturally followed. The subject was introduced by the question, "When a store opens to do business, how do the proprietors let people know what they are selling?" "How shall we advertise?"

One of the first means used was a letter to the first-grade families, to tell them that the Model Store was now ready to sell dry goods. A poster was made and placed in the hall outside of the door, and an advertisement was sent to the third grade to be printed in their newspaper. The working out of such posters, letters or circulars, and advertisements throughout the year provided golden opportunities for English work. The spelling lessons grew out of this phase of the work. Drill was given where necessary, but always drill with interest and in a form definitely related to the problem in hand.

The work in arithmetic, in addition to the actual planning, measuring, and making of the things needed, was largely centered around the sales problems. The three processes of adding, multiplying, and subtracting were frequently called for in the work of getting ready for the

first sale, as in all the later sales. The class was looking for its best mathematicians for cashiers as well as salesmen, and every child was doing his or her best to qualify for one of these positions.

Discussion of the opening and closing hours for the store, and adjusting these to the demands of other work, made it necessary for the children to be able to read the clock, and so this skill was developed. A large cardboard clock-face, with movable hands, was hung on the wall, near the store, and set whenever necessary to show the hour of opening a sale. Between sales, this device was used in many motivated drills, and before the end of the year the little store-keepers were able to read the time.

The first grade's earliest purchase of rulers had showed that the store itself was too small to allow more than one living salesman to handle the stock freely in serving living customers, especially when these came thirty at a time. Moreover, it was desirable that as many second-graders as possible should get the training afforded by selling and that each first-grader should have an opportunity really to see the stock and exercise some judgment in his purchase. So it came to be the rule, when a sale was on, to expand the department in question to include the entire room if necessary, the stock being made accessible temporarily on desks, window sills, etc.

The day for selling dry goods to first grade finally came, and a happy one it proved to be. The first offering was confined to material for the dolls' union suits. Both woolen and cotton goods were sold. The occasion discovered to the second grade the need for greater freedom of speech while selling—the salesman needing not only "to know his stock" but to be able to talk freely to his customer about it. It also showed the need for much drill in arithmetic, especially multiplication and the making of change.

(b) Toy Department.—And now Christmas time was coming, so of course the Model Store must put in a toy department! After a general discussion of toys and a visit to some of the stores down town to get ideas, a great deal of freedom was allowed, both in choice of subject and in method of work. The output comprised rag dolls, bean bags, blocks (with or without A B C's on them), sets of plasticene dishes, a ring-toss game, wooden furniture, wagons, clay marbles and bags to keep them in. Price tags were made and placed on the toys after the class had decided on their value. This was determined by good workmanship and attractiveness, a large element in the latter being "whether they worked or not."

After Christmas there was a "bargain sale" of toys, the prices being greatly reduced. This marking down provided a fine lesson in subtraction. Later the toys which were not sold were removed from their prominent place on the second floor and placed in the basement, as is shown in the picture facing page 74. The ring-toss game proved one of the most popular toys and was frequently used in the arithmetic work, as were the bean bags.

The second grade's share in the joint Christmas party was to work up a surprise for the other grades. Since they were making toys, they decided to make a "Toy Story" and act it out. As this was developed under the leadership of the student teacher, the toys one by one waked up and told the story of their lives. In order to tell these stories, a good deal of work on the sources of the materials of each toy was necessary. How it happened to come to the Model Store was another feature of the story. Stimuli like the following were used: "If this drum could speak, what would it say about itself?" "If you were a horn, how would you tell your story?" "Where shall we have the toys when they speak to each

other?" ("In the store.") "What shall we call the place?" ("Toyland.")

So the story was called "In Toyland." Each child represented a toy, making a speech about itself. It told where its first home was, what it was made of, and how it happened to be there, in the Toyland of the store. Then came a toy dance of joy at being with the children on Christmas Day.

The making of the toys, the fitting up of this department in the store, playing with and selling the toys, the working up of this part of the Christmas celebration, the singing of the usual carols—all brought a real Christmas spirit into the school; and all the time the children's experiences in reading, writing, and arithmetic, in manipulation of materials and in construction, were increasing in number and in scope.

(c) The Ready-made Clothing Department.—The approach to this was made through the coming necessity of first grade for buying some of the garments needed by the dolls, since their child-doubles would not have time, even if they had the ability, to make all of their clothes.

Each second-grader decided what kind of garment he wanted to make and drew a picture of it. These pictures were to be put into the Catalogue of the Model Store, which was planned to contain lists, pictures, and prices of all the articles made for the store.

The children had an opportunity to review their work on fabrics while selecting the materials for the garments they had decided to make. Patterns were cut first, in every case. These patterns were themselves put into the store later, forming part of the stock of the notion department. The clothing was made to fit the first-grade dolls, since these were to be the chief patrons of the store. The details of this work will not be given, since a description of the development of each garment, the actual use

of the patterns, the method of sewing, the fitting, the consideration of the question of appropriateness, would make this story too long. Moreover, most of it already appears in the corresponding section on the first-grade project (page 31.)

When the garments were finished, racks were made of wood, to hold them. The costumes were criticized, the price set, and tags made. The manager and salesmen were discovered, as in the case of the dry goods department, in the arithmetic classes and the general discussion work. The poster, "Friday Sale! Come and Buy! BARGAINS IN DRESSES. The Model Store. Second Grade," was made and illustrated with men, women, and children, wearing the new styles as they descended the stairs supposedly leading from the department on the second floor. The student teacher designed and drew this stairway, but the children themselves designed, drew, colored, and cut out the customers, and pasted them in place. They also did the printing with the price-and-sign-marker, the student teacher helping them to decide arrangement and spacing. An advertisement was sent to the third-grade newspaper. So the ready-made garment department was launched, and the sale followed. While this part of the work was in progress, the children produced "The story of the ready-made suits."

(d) **Millinery Department.**—Hats and caps were next in order. Again, the materials needed were studied, and selected from the stock. Methods of decorating or trimming hats were emphasized. There was some study of feathers, pointing out those which may be used freely and thus sowing the first seeds of membership in the Audubon Society. A few tiny paper flowers were made, but very few, since they were necessarily too small for childish fingers to manage with advantage.

Of course while the hat making was in progress, the

atmosphere of the room reeked of millinery. Some of the decorated hat boxes may be seen on the second floor in the picture of the store facing page 74. The making of these boxes was an interesting combination of industrial and fine arts. The arithmetical training afforded by the planning, marking, and cutting of the stiff paper used in their construction was well worth while. Finally the big hat sale or "Millinery Opening," described under the first-grade project, was arranged. (See page 43.)

(e) Shoe Department.—The children's own shoes were carefully examined, their condition as to blacking and general care being tactfully remarked in passing. Samples of shoes of good shape and quality were shown and discussed, in order that the salesmen-to-be might know what to say about their wares.

The children were brought by the circumstances face to face with the problem of supplying something to take the place of leather in this shoe-making project, since even the slowest of them readily understood that real leather was out of the question for shoes so small. The kid of discarded gloves was substituted, and tiny shoes of tan, gray, black, and white were made for the families of first grade. Incidentally, the appropriate occasions for wearing each of these were discussed. Prices were put on the shoes, and boxes were made and labeled. The use of moccasins by the Indians was recalled by the children as a very early method of protecting the feet.

Shoe advertisements were cut from newspapers by the children and brought to school. These were read by the class for suggestions for their own publicity material —and to improve their reading ability. One of their advertisements ran as follows:

New Spring Shoes.
Cheap! Cheap!
Buy while they last.

Shoe stories were found, to be read, told, and dramatized. "The elves and the shoemaker," "Goody Two-Shoes," and "Cinderella" were among these. And the second grade shared with the first the pleasure of seeing the Cinderella puppet show given by one of the higher grades.

Tiny silk and cotton stockings were made from the legs of worn-out "real" hose, to match the shoes. The chief emphasis was on the appropriateness of the shoe to the stocking, and of both to time and place. Apropos of this discussion, the following story was built up:

THE QUARREL OF THE SHOE AND THE STOCKING

One day a little girl put on a pair of fine silk stockings with her heavy walking shoes. She had not gone very far before she heard the stocking say to the shoe, "Oh! oh! you are wearing a hole in my toe!"

"I can't help it," said the shoe. "This child *would* put me on when she knew she would have to wear you."

"Doesn't she know that it is too cold for me? Besides, I should be worn only with slippers and pumps. And she surely ought not to wear me when she takes a long walk."

"I love to be worn with nice stockings like you," laughed the shoe.

"You make me angry. You ought to help teach our little mistress the better way, instead of laughing at her mistake. Now I feel my *heel* tearing!"

The shoe stopped laughing and the silk stocking wept bitterly. The little girl wondered how her feet happened to get so wet and cold.

In arithmetic, work on "the pair" was emphasized. Counting by twos led into a more or less formal building up of the two table. The children, having met the facts of the table in the practical situations of making, mark-

ing, and selling shoes and stockings, were prepared to enjoy the process of arranging them in regular order.

(f) **Notion Department.**—About this time the children from first grade were finishing up the clothes for the dolls, and needed pins, buttons, snap fasteners, tape, and hooks and eyes. This meant the putting in of a notion department. Small lots of the articles named, along with thread, darning cotton, etc., were brought in. Organizing this material meant sewing the buttons on cards, a dozen on each; arranging hooks and eyes and snaps in the same way; and sticking the pins neatly in papers, a definite number in each row. The manager of the department checked up the accuracy of this arithmetical work. During this work the class made this story:

THE NOTION FAMILY GOES TO A DANCE

One night Mrs. Hat Department asked the Notion Counter family to a dance. The tape rolled merrily down the street, and the buttons rolled, too. The needles and pins hopped along. Some of them stuck in the ground. "Help!" they cried.

Just then the hook came bouncing along. "Why are you stopping here?" he asked.

The poor needles cried, "Please, Mr. Hook, pull us out."

Mr. Hook laughed and said, "Why did you step so heavily?"

"Never mind! Maybe some day you'll get stuck yourself," replied the needles, "and then you needn't ask us to pull you out."

So Mr. Hook pulled them out, and they went on to the party. Pretty soon the snaps came rolling down the hill to Mrs. Hat Department's front door and joined the merry crowd.

At the party they played games and danced. The unlucky Mr. Needle stepped on Miss Tape's foot. Miss Tape became very angry.

"Get off my foot! You have fastened me to the floor. Boo-hoo-hoo," she cried.

Just then they all heard a tap, tap, tap, on the window pane. Miss Eye looked out and spied the manager of the notion department.

"Oh, let's run!" they all cried. "Good night, Mrs. Hat Department."

So they all rolled, hopped, and bounced back to their home.

(g) **Furniture Department.**—The building of the homes in first grade being nearly finished, the furnishing of these houses now began to cast its shadow before.

The second grade decided to make six sets of furniture, one for each room in a doll house. The number and kind of pieces for each set were worked out by all the children together. They decided to use wood, since "real furniture is made of wood." A trip to a furniture store down town was planned, to see the variety of wood, of forms, and of color. Samples of different kinds of "furniture wood" were shown and tested as to hardness.

Each set of furniture was undertaken by a group, who selected their own leader. This leader or "boss furniture-maker" was held responsible for keeping the work up to the specifications of size, form, finish, and time-limit. Every child made at least one piece, some of them making three or four. Such things as piano, sideboard, kitchen cabinet, and bookcase were undertaken by those who showed most skill in this work. The children were held to as high a standard of workmanship as possible in view of their immaturity, not only by appealing to their pride in turning out as good products for the store as they could, but by telling them that the best of their furniture was to be used by the first grade as models.

The little cabinet makers decided to paint their furniture, and to decorate it with flowers and other designs.

They made the living room set black and decorated it in red and gilt. The dining-room furniture was painted blue, with designs of rose. One bedroom set was cream, the other a light yellow, both being decorated with green and pink. The kitchen furniture was painted white.

The Indian village on the sand table—the home of the Assunpink tribe—had become rather dilapidated by this time. So the serviceable articles in it were dusted and put into the store as an Indian department, while a lumber camp, which handled the kinds of wood they were using, grew up to take its place on the table. The story of "The honest woodman" was read by the class, and the carpenters' poem was made.

"We are busy carpenters,
Working day by day;
We like to saw, and hammer nails,
Then put our tools away.

"Chairs and beds and tables,
Standing in a row—
In the store we've put them,
To sell at prices low.

"They are very strong and neat,
As you all can tell;
They are painted black and white,
All ready now to sell."

(h) Bedding and Curtain Department.—The dolls' beds must have mattresses and pillows, of course, not to speak of sheets, pillow cases, blankets, and counterpanes. The dressers, tables, and sideboards needed scarfs. And surely the dolls would want curtains at their windows. So each child elected to make something from this list. The class saw for themselves that each must consider the others in making his decision, in order that the store

might be able to supply all of these demands, and not be left with an oversupply in some lines, which would have to be sacrificed. The process of adjustment which resulted was very interesting to the supervisor, who was looking on as an outsider and who only occasionally interjected a word of advice.

(i) **Carpet and Rug Department.**—Floor coverings were the next things to be attended to. In answer to the question, "How shall we stock this department?", samples of various kinds of floor covering were brought and named by the children. It was decided what kinds the Model Store should make. Wool and cotton were pronounced too scarce and precious under the war conditions to use for this purpose.

"But wouldn't silk cost too much?"

"I happen to have a lot of silk carpet-rags, cut years ago, which would be just the thing for pretty rugs, and which we can use without any fear that we are wasting what should be used for the soldiers."

The children were quite satisfied to accept these, and they were brought to school the next day. First the rags were sewed together and each child rolled his long strip into a ball. Wooden looms were made, and rugs were woven on them to fit the dolls' rooms. These looms are seen stacked together in the lower left room of the store; some of the rugs woven on them are hanging on the wall of the room above this, and the end of one of them, attached to the rug poster as a sample, shows at the left margin of the picture. (See page 74.) The rugs for bathroom and kitchen were made of raffia, braided, coiled into a circle, and sewed. One of these adorns the rug poster just mentioned and others are seen on the walls of the store. "The great event of the season! Special sale of rugs" was now advertised, and one more department had its day.

(j) **The Cafeteria.**—A new feature in the rug sale, devised by the student teacher for the delight of the first-grade shoppers and the further education of her own little pupil salesmen, who still needed drill in computation, was the establishment of a cafeteria, so that the shoppers might lunch in the store. The first-graders, too, profited by this clever arithmetical game, for they had to "count the cost," though it was only the second-graders who totaled the receipts and calculated the profits.

To establish this cafeteria, the children brought pictures of delicious food, cut in the main from the *Ladies' Home Journal.* These were mounted, marked with a price, and placed around the room. The children were told that they ought not to spend more than fifty cents for their lunch. A second-grader accompanied each little shopper, writing on a slip of paper the names and prices of the dishes chosen. When the child finished selecting his lunch, the guide helped him to add. Then he was sent to the cashier to pay, and to receive his change if there was any coming to him. Both shopper and guide were asked to sign the sales check, though they were not told that the teacher meant to verify the addition later and to see that any child who needed it received special help.

This cafeteria game was frequently repeated "by request." It was often asked for even when there was no sale in progress, for the children loved dearly to play it. The guide or, if first grade were not "in it," the luncher, who made no mistakes in adding the items or in verifying the change offered, was made cashier for the next time.

(k) **China Department.**—This stock was made up entirely of the Indian bowls. These were hand-formed, fired in the kiln of one of the potteries nearby, then decorated with crayola, and shellacked. A number of them may be seen in the room of the store which is temporarily housing the looms. (See page 74.) Posters

were made for the bowl sale, the best paper patterns that had been used for the bowls forming the decoration. An interesting story made by the children while this work was going on is given in the Appendix, page 304.

(l) **Book and Stationery Department.**—The stocking of this part of the store took a most interesting form. The grade made A B C books, and number-rhyme books, both with illustrations, " for the trade," expecting first grade to buy for themselves and third grade to buy for their city library. It may be said in passing that the frequent making of verses in this, as in the other two grades, proved more serviceable in teaching phonetics than the grouping of words in " families," and the listing and memorizing of members of each family—besides being much more fun.

The making of the alphabet book was a large contribution along this line. After the A B C jingles were built, a picture was made for each, thus affording opportunity for two modes of expression of the same thought. Placing the couplets on the leaves of the book was a valuable writing lesson. The best penmen were rewarded by being allowed to write the special gift books for the supervisor and the art teacher. A gray art paper was used for these books, one sheet for each couplet, and the pictures were cut out of various bright-colored papers. (See Appendix, page 299.)

The number-rhymes were illustrated in crayola, and furnished excellent opportunities for grouping and spacing. (See Appendix, page 296.)

The children suggested putting into the stock of this department the sundry and various postcards and valentines that they had made. Consequently any one who needed a Hallowe'en, a Thanksgiving, or a Christmas card, a birthday greeting or a valentine, had to seek no farther than the Model Store!

Paper, envelopes, pens, and pencils were added to the department. A brief study was made of the sources and the processes of manufacture of paper; and ways of economizing this commodity in response to the appeal of the government were discussed and practiced.

It was the intention of the children to make some simple little story books for the first-grade trade, and to copy in the form of booklets some of the poems which had been taught in the second grade, both of these to be illustrated. But the end of the year was drawing too near to permit doing all of this, so Field's "Gingham dog and calico cat," Stevenson's "Land of story books," and others, could not be thus embodied.

(m) **The Picture Department.**—The fact that this department was to be installed afforded stimuli for the art work throughout the year, the best pictures in any unit of work being retained for the Art Gallery of the Model Store. While the children were Assunpinks, they produced many interesting and artistic representations of Indian life. Many of their original stories were very well illustrated, the privilege of doing this being granted to those who finished transcribing the story satisfactorily before the lesson period was over. One of the occupations open to those who finished any work well, as in the first grade, was to get a book from the closet and read whatever the child wished. Another, which rivaled this in popularity, was to get any earlier piece of work from one's portfolio and illustrate it.

(n) **Grocery Department.**—The original plan for the store included a grocery department and a beginning was made in the fall by gathering and drying seeds. Pictures and advertisements of food were mounted, and containers were made. Some of the stock was to have been just "make believe," but most of the children took very little interest in putting "make believe" articles in the store.

The whole situation up to this point had seemed too "real" to them to make this plan attractive; so it was decided in the spring to have the department mainly for green groceries. It was with this in mind that the children set to work to plant their plot in the school garden. Wishing to put a variety of vegetables on the market, they planted as great a variety of seeds as possible. A space was assigned to each child, and he was allowed to select the kind of vegetable he preferred, from the seeds available, or to bring some other kind from home if he preferred. As the products matured, they were brought up to the store and sold to the Normal School lunch room. The money thus raised was used to help buy the refreshments for the Mothers' Party at the close of the year.

4. Some General Features of the Project.—Many of the details of the work must be omitted, for lack of space, but some of the general features should perhaps be mentioned. The project afforded special opportunities for English work, and as many of the children were of the semi-rural type, being brought in each morning from Ewing Township in a bus, this work was especially necessary. The ordering of goods by letter, telephone, or telegraph, or in person from agents or drummers, supplied motive for direct and varied expression of thought. Lessons along this line are given in the Appendix, page 301.

The store prepared for all holidays as they came along, and the whole room in consequence was pervaded with the holiday atmosphere. Other departments might have been added, had June 30th not come so soon. The project was really developed more fully along some lines than this record shows, but what has been omitted for fear of wearying the reader with details can probably be supplied, or rather replaced, in imagination if he desires so to do. The method of developing the project may be as varied in detail as are department stores themselves,

from the complete and complex organization of Wanamaker's to the "general store" of the little village.

The drills were as many and as varied as those described in the first-grade project, and each one was just as closely connected with the work in hand.

The preparation of the managers' and salesmen's speeches strongly emphasized polite forms adapted to many practical situations, thus establishing habits of courtesy. During the sales the managers looked after the discipline of the situation, as well as checked up the service, seeing that customers were waited on promptly, and helping the first-graders in many ways.

IV. THIRD GRADE MAJOR PROJECT—PLAYING CITY

The class in which this project was worked out was a troublesome group of children. They varied greatly in ability from the few natural leaders to the few mentally deficient and another small group whose morals were decidedly below par. With the exception of the four or five leaders, they were inclined to be lazy. The enforced vacation during the influenza was hard on them. Their being allowed to do largely, if not exactly, as they pleased during this month out of school did much to nullify the habits of work which had been well started during the development of the Fair project.

So it happened that though—as indicated in the Introduction, page 16—they had enthusiastically suggested playing city, they were as halting when it actually came to beginning the work as they had been in welcoming the help of the other grades. Their half-hearted response, on the day following the supervisor's visit, to her parting suggestion, "Think it over and decide just *how* you'd like to play city," was probably due in part to lack of skill in the student teacher in whose hands this work was put. Be that as it may, the need for an awakening soon

becoming evident to the supervisor, she sowed some seeds in a talk with the student teacher which bore rich fruit in the following story:

To-day I am going to tell you a story about a little girl who was lost in a great big city. She had been playing on the street near her home, with some of her little friends. But somehow she had become separated from them and she found herself alone on a strange street. She wandered about for a long time, looking for other little children like herself, but she couldn't find one. She was getting discouraged and very tired, but she walked on, and on, and on. At last, just as she was turning a corner, what do you think she saw? There stood a bigger building than she had ever seen before, with its doors standing wide open. She walked through one of these doors, and as she stepped into the wide hall, she stopped. She thought she heard voices, so she tilted her head to one side and listened, to make sure.

What kind of voices do you suppose she heard? They were the happy voices of little children, and her heart leaped with joy. She walked down the hall to see whether she could find out where they came from. Oh, yes! There in a large room she saw many little children, all busily playing. She went to the door and stood looking at them. Soon the children spied her and they cried, "Oh, come right in, little girl! Don't be afraid."

She was very, very tired from her long walk, but every one here was having such a glorious time that she forgot all about her aching feet and legs. She wondered what they could be doing. They seemed to be making dolls and building houses, but she couldn't make out what it all meant. So she went up to one of the children and said, "What are you playing here? You seem to be having a grand time."

"Oh, we are playing families. We are the first grade."

"Why, isn't that fun! How do you play?"

"Well, I'm the mother of my family. Jack's the

father, and then we have four children. Wouldn't you like to stay and play families with us?"

The little girl was just about to say yes when she looked across the hall. There she saw another group of children playing.

"No—at least not just now. I think I shall go over there first and see what those children are playing. Thank you, and good-bye, for now. Perhaps I'll come back."

The little girl hurried across the hall and walked into the other room. She looked around and saw toys and other things on a counter, and she guessed what they were playing there. Can any of you guess what they were playing?

Yes, they were playing store. The little girl went up to a little boy and said, "It looks as though you were playing store here. Are you?"

"Yes," answered he. "We keep a department store for the first-grade families. We are the second grade."

"My! that must be nicer than playing family," replied the visitor.

The other children began to notice the little girl. They had been too busy at first. They crowded around her telling her about the good time they were having playing department store, and asking whether she wouldn't stay and play with them. She became so interested that she thought she might stay, but just as she was going to say yes she happened to look up, and there across the hall she saw another room full of children. She excused herself and hurried over to them thinking they might be doing something that would be even more fun. Who do you suppose they were?

Yes, they were the third grade. When the little girl got into the room she looked around, but she didn't see anything going on. "Aren't you doing anything in this room?" said she to one of the boys in the front seats.

"Doing anything! What do you mean?" he asked.

"Well, in the first grade they are playing families, and in the second grade they are playing department store.

I looked over here and I thought that you, too, must be playing something."

"No, we aren't playing anything yet, but we are going to. We don't want first and second grade to get ahead of us," the third grade cried.

"I think I'll go back to the second grade," said the little girl. "They surely are having a good time there."

"I'll tell you what to do! You go back to second grade now, if you want to, but come back here the day after to-morrow. We shall be playing something better than either store or family then," a little boy called to her.

Do you suppose the little girl came back?

This story, well told by the teacher, brought from a child the anxious question, "Do *you* think she came back?"

"I believe she did," said the teacher, "but whether she would stay or not depends on you, and you, and you." The class thereupon took hold of the work in earnest, and were soon deeply interested.

(a) Preparing for the Play City

The children wanted to start at once to put in the houses, streets, trees, stores, anything and everything which they thought belonged to a city. So the teacher asked a few questions without trying then to reconcile the conflicting answers. "How many houses shall we have?" "How long shall we make the streets?" "How large is this city to be, anyway?"

After these questions were satisfactorily answered the next day, the children having also told what they had been able to learn in reply to the teacher's closing request that they try to find out the size of Trenton, its shape, and the number of people living in it, they were asked to recall what they had done first when they began work on the Fair. Thus the need for a diagram to guide the construction was developed.

1. The Map or Plan.—"Shall our city imitate any real city, or shall it be different?" A vote was taken on this point which resulted in a majority for making the new city as much like Trenton, their home city, as possible.

"Then we should know just how Trenton looks. Can you think of a way in which one could see the whole city at once?" The quick response, "From an aeroplane," added fuel to the flame of their interest in this game. So the desire to show Trenton on the floor of the schoolroom as it would look from an aeroplane became one of their strongest incentives. It even made the smallness of representation lose some of its disadvantages.

The work was started by having an outline or ground plan of the school building put upon the board. Then the street on which the school is located was drawn. This happens to be one of the chief residence streets. The main business street, intersecting this, was next placed; then other important downtown streets. The necessity for ending these streets somewhere showed that the city must have a boundary, and "city limits" had to be explained. The Delaware river, Assunpink creek, and the canals were next put on the map.

The children had now gone far enough in developing their diagram to profit by seeing a true map of Trenton. This, a simple outline map, was used constantly for verification and reference, but the children's map grew more or less independently of it, as point after point was much more intelligibly developed by the logic of the situation than it could have been by a mere study of the complicated plan of Trenton. Assignments such as "Now show the rivers, canals, railroads," were given as needed.

The map, when finished, was transferred by the children from the board to the under surface of a large oblong piece of oilcloth, for permanent reference. Later it was drawn, very much enlarged, on the floor as a guide for the

actual building of the city. This floor diagram was made about eight times as large as the oilcloth map. Working out the proportions—very roughly, of course—proved a valuable arithmetic lesson.

The fact that Trenton's streets intersect at many and various angles and that its area is very irregular in shape complicated the work exceedingly. An approximately rectangular city, with streets running at right angles, would have been much easier to reproduce. Indeed, the head of the geography department in the Normal School, familiar with the city and its environs through many years of faithful and intelligent study and teaching, was sure, when the supervisor first went to her to ask for a simple outline map, that any representation of Trenton by third-graders was an impossibility. Of course the angles at which the streets cross each other were not reproduced with absolute accuracy; relative distances were not always true. But the most casual observer could see that this play city was a miniature Trenton. The very irregularity of the plan of the city had its own educational values. For one thing, it made it necessary for the children to be especially careful as to directions, and developed an intelligence and skill in determining these which the writer hopes will be of value in their later work in geography, as well as the practical affairs of every-day life.

2. The Construction of the Site or Foundation.—The children wanted to build their city on "real" earth. Different samples were brought in—sand, clay, garden soil—and subjected to discussion and criticism. The class agreed that they must use garden soil, since they meant to plant grass, trees, and flowers in their city. So the tedious task of transporting this material was begun most cheerfully and carried on perseveringly. The ground had begun to freeze and it was no easy task to find garden soil in the heart of the city, or to remove it when found.

However, nearly every child helped, though several brought only a small paper bag full of earth. A few of the boys used their little wagons and worked like Trojans, until the soil was eight inches deep. Those who did most of this manual labor were called "the city fathers" and an honor list of their names was posted where it could be seen easily by every visitor to the little city.

Before the soil was put on the floor, and even before the map was drawn there, the need for protecting the boards was realized. Watering the soil enough to keep grass and trees alive would surely spoil the floor.

"What shall we do about it?" "Make imitation grass," said one. The suggestion, "Throw loose grass around," was immediately met by, "That would get yellow." "Get sod and take it out every night to water it." "Put oilcloth, or tar roofing, on the floor." The children readily agreed that the last suggestion was the best way to meet the difficulty.

"How shall we get this?" "Raymond has some tar paper; let him do it." Raymond said he hadn't enough. Lester said, "I will bring oilcloth to put down." But the teacher decided that this would be too expensive for one child to undertake. "Ask the superintendent to do it," met with approval.

"How shall we ask Mr. Clark?"

"Write him a letter."

So the class set to work, with the following result:

"Trenton, N. J.
"November 12, 1918.

"Dear Mr. Clark,

"We are going to make a city. We want to have grass in it. We don't want the floor to rot. If you can, we'd like you to put a waterproof covering on the floor.

"Sincerely yours,
"Third Grade."

Mr. Clark responded promptly, not only covering with tar paper the space to be occupied by the city, but fencing it in neatly with six-inch boards, to keep the soil from being tracked over the rest of the floor.

(b) Organizing the Grade Itself as a City.

While the children were working as hard as they could in this play situation—digging, shoveling, carrying soil to school—the organization of the school city was begun. Since the third grade was to provide the play city background for the second-grade store and the first-grade families, it must assume certain obligations to these citizens. The children readily conceded that it was the city's duty, for example, to look after the public safety, *i.e.*, to give fire protection, health protection, police protection; to construct lighting and water systems; to provide public buildings, theaters, libraries, etc. Therefore it behooved the third grade to carry on a city life in school at the same time that the miniature city was being built on the floor.

1. *Naming the City.*—The children first of all wanted a name for this city of theirs. The following suggestions were recorded on the blackboard for consideration, as they came from the class:

Our City	Our Big City	The Normal
Our Little City	Our Fake City	School City
Rock City	New City	The Third City
Pershing City	The Bridge City	Third Grade City
Our Own City	Victory City	The Little City of
No Man's Land	United States City	the Third Grade

Victory City received a majority vote, the armistice having just been signed. The desks became the houses of the children in the school city, the teacher's desk being made City Hall. The aisles became the streets; the bench where troublesome pupils were sometimes temporarily isolated became the prison—the children quite insisted on this; the bookcase became the library. The sand table was

to play a number of rôles—factory, store, forest, pottery, bank—as occasion demanded.

In the names chosen for the streets and the park of this school city, one may read the signs of the times. The aisles were called Flag Street, Liberty Street, Union Street, Honor Street, Strong Street, Brave Street, Trouble Street. The broadest street—the space in front of the desks—was named Star Avenue. The narrower space in the rear was Peace Street. And the playground was christened Army and Navy Park. Trouble Street was unique in that its name oscillated. It was Trouble Street whenever any of the residents of other streets moved into it—often owing to protests from neighbors who found that these undesirables were lowering the record of their home street. But it became Victorious Street when its residents demonstrated their fitness to return.

The householders of each street made the signpost erected at the front left corner of the first house (desk). The writing of the signs provided an interesting penmanship and spelling lesson. The best looking name was accepted, to be colored and pasted on the wooden guide board.

A beautiful satin pennant, with a background of blue and the monogram V. C. in white and red, was made by one of the student teachers and presented to Victory City. This was used in various ways as a special mark of honor to a street or at times to an individual.

2. The City Departments.—Very early there arose a real necessity for the organization of city departments; the streets had to be kept clean and " free from spitballs," as one boy put it; the Junior Red Cross money had to be handled and accounted for; the plants and the temperature of the room needed attention; and the second-grade store as well as the first-grade families must be protected in various ways. Moreover, the halls, the basement, and

the "park" presented problems of policing. A detailed study of the work of the various departments in a real city was made, the motive being to find out how to run Victory City.

(a) **The Police Department.**—The class made the following list of the duties of the police of Trenton:

1. See that there is no blocking of traffic.
2. Protect life and property.
3. Prevent fighting.
4. Chase loiterers.
5. Give information (tell people where and how to go).

Then what should our police department do?

1. Prevent fighting in school and on the campus.
2. Prevent crowding and shoving in passing into and out of the room.
3. Stop any fooling.
4. Prevent bullying.
5. Look after the little ones, especially the kindergarten children, at recess and before and after school.
6. Stop all calling out.
7. Stop all children who are damaging property.
8. Give especial protection to the sand table. (The care of this table had been difficult, since all the children on the first floor who stayed at noon lunched in the third-grade room without any supervision.)

The foregoing is the list as it stood early in the year. Additional duties developed almost daily for a time.

(b) **The Health Department.**—The commission for this department decided on these special duties:

1. Attend to ventilation.
2. Stop any spitting on the floor.
3. See that no child sneezes or coughs without using a handkerchief.
4. Keep at least four feet away from any person who has a cold.

5. See that children have clean handkerchiefs.
6. See that children come to school with clean hands, faces, teeth, heads.
7. No playing with handkerchiefs and other people's hats.
8. Keep hands, pencils, crayolas, out of mouths.
9. See that board is kept clean.

(c) **The Department of Public Buildings and Parks.**—Only a few of the duties of this department were formulated at first, the others being added as necessity arose.

1. No scratching or writing on walls or desks.
2. No careless erasing of work on board.
3. No playing on grass when Dr. Savitz (the principal) asks us not to.
4. No throwing paper or other trash on the grass of Army and Navy Park.
5. Picking up any trash that may get on this grass.
6. Reporting to the police department all children who mark on building with chalk or crayons.
7. No clapping of erasers on building or steps.
8. Dust the schoolroom.
9. Beautify the school city:
   (*a*) Bring flowers, and keep the plants in the room healthy.
   (*b*) See that children write well on the board.
   (*c*) Bring pictures for the room.
   (*d*) Select the best of the class work to help decorate the walls.
   (*e*) See that there is something interesting on the sand table.

(d) **The Street Cleaning Department.**—

1. Each citizen to keep his part of the street (aisle) on which he lives clean.
2. Street cleaners to be appointed for Star Avenue and for Peace Street.

3. See that all hats and coats are *hung up* in the cloak room.

4. See that floors are kept clean in cloak room and halls.

5. Keep the basement tidy, and report to the Board of Health any misbehavior there.

6. See that the waste-paper basket is passed after any class work that makes much trash.

(e) The Fire Department.—A special method of drill for the first three grades was worked out. This did not supersede the regular fire drills, but was established as an aid to them.

(f) The Department of Finance.—This was brought into being chiefly to take care of the sundry and various collections which occurred during the many "Drives" of this war year. It also looked after different small funds of the school city proper, *e.g.*, the proceeds of the sale of the Thrift Stamp Jingle Books which the children made.

(g) The Department of Public Affairs.—Planning for matters of general importance was the province of this department. The inter-grade entertainments, holiday affairs, assembly meetings, civic help when needed by first-grade families and second-grade storekeepers, all came under its care. Later in the year plans for the closing pageant fully occupied its time.

(h) Some General Features of the Departments.—Officers were elected for each of these departments. It was not explained to the children that their departments of police, health, and fire were really subdivisions of the greater department of public safety, since it was desirable to have as many offices as possible to fill in this school city. The names of these departments did not correspond exactly to those of the commission government of Trenton, it being the supervisor's policy here as

elsewhere to accept the children's own wording whenever possible. The exact names, moreover, connote some duties which would never fall within the children's experience. Every child in the room held some office, so the government was truly representative. The teacher was elected mayor of the city. Thus was the machinery of government set in motion.

Changes were frequently made; duties were added as needs developed; duties were cut out when needs ceased or when the means which had been chosen proved ineffectual. The fame of the district nurse in first grade had reached the school city, and suggested the election of a city nurse as one of the officials of the health department. She made daily inspections of the children's teeth, hands, handkerchiefs, clothing, and homes (desks).

There was intense interest in the making of badges for the heads and the members of the various departments. Each department decided on the form and content of its badges. The personnel of the departments changed every month, the teacher aiming to give each child as great a variety of experience as possible.

3. Establishing Relations with the Other Two Grades.—Now that the city was in running condition, it was in order to acquaint the families and the storekeepers with the fact that the third grade stood ready to give them a city's help and protection. A letter, whose tone showed an interesting change of attitude toward coöperation, was sent to each room.

"Dear Families (or Salesmen),

"We are going to tell you how third grade can help you. We are playing city. We can give you life protection, fire protection, clean streets, lights, water, and many other things. Do you want us to help you?

"Your city friends,

"Third Grade."

4. The City Calendar.—The designing and making of the calendar was one of the art problems for each month. The activities and other special features of the month were suggested in the illustrations. The fixed or customary holidays were indicated in various ways. Crayola and cut paper were both used in making the pictures. In a repetition of this work it would be possible to indicate the date of coming events in the city life.

5. Stocking the City Library.—Another line of activity was the enlarging of the library housed in the school closet. The grade decided that each child should make one book. All these books were alike in construction, a rather permanent binding being made to hold the sheets of foolscap paper, cut in half crosswise. In these books records of the different lines of work as they developed were to be kept. The covers were made of gray cardboard, variously decorated with stick printing in contrasting colors.

There was one volume for the History of Victory City, to be written as the city grew. This was truly history in the making! Others were to contain original poems; original stories; city expense accounts; jokes; a record of public health work; other department records; descriptions of holiday celebrations; the play which the children wrote in connection with their study of primitive history (see pages 119, 129, 324); Robinson Crusoe, retold; trips, descriptions of entertainments. These books were in the making throughout the year. Whenever a good piece of work was done by the class, it was written up for the library of Victory City. The child who contributed most to the production was rewarded by the privilege of doing the writing in the book, unless he was obliged to forego the honor because of poor penmanship. There were also many records of individual projects, the "projector," of course, doing the writing in this case.

Some samples of work from these books are given in the Appendix. Thus was begun an "evolution of the book," which the writer hopes will be continued in the higher grades.

6. Club Life.—The dramatic club and the three reading clubs formed an interesting feature of the city organization. At first the children formed their own groups, but such differences of ability developed that they themselves asked the teacher to rearrange them. In this process, children of like attainments were put together and each club was allowed to progress as fast as it could. These groups selected chairmen for their meetings. Each chairman held office during the reading and development of one story. If the tale was a very short one, a second term was allowed, unless the officer had proved unsatisfactory, in which case the club gladly made a change. The chairman was responsible for the mode of conducting the meetings, for the progress of the work, and for the behavior of the members. He usually asked the children for suggestions in the choice of the next story. The story chosen, he was expected to work out a scheme of procedure before the first meeting. Books and stories were either selected from the "city" library or brought from home. In the latter case, they were first submitted for the teacher's approval.

The meetings of the clubs were conducted more or less independently of the teacher, who "visited around" among them, to answer questions or make suggestions. She spent most of her time with the weakest club, which was able to handle only second-grade reading material at first, but which succeeded in bringing most of its members up to the standard by the end of the term.

Whenever a club had worked a story up to the sharing point, they notified the teacher, and she arranged an interclub meeting to hear it. Sometimes the entertainment

took the form of reading; sometimes the story was told. Occasionally it was given in pantomime; frequently it was dramatized. There were many inter-club contests, as well as entertainments for first and second—occasionally also for some of the higher—grades.

(c) The Building of the Play City

While this organization of the school city was going on, the building of the play city was begun. (pp. 102–105)

1. Grading.—"In riding on a train, how many of you have noticed how the track changes in slope?" "Where are the hills in Trenton?"

The contour of the land was determined roughly by questioning the children as to their trips down town—which were recognized as being "down hill"; their visits to the outlying park—which lies much higher than the heart of the city; the streets on which they coast and the direction their sleds run on these; the good coasting places in the park; the slope from the main street to the river and to other streets, etc. The supervisor, being a comparative newcomer in Trenton, secured a government contour sheet to enable her to guide this development at the least possible expense of time and to check it up with confidence. The children then piled up the earth in the proper places and graded from these to the river and creek.

2. River and Canal Building.—The most pressing problem now for these little city builders was to decide how to put in the Delaware river, Assunpink creek, and the forked canal, since these interrupt the course of many streets.

In the first place the teacher's questions, "Shall they be made alike?" "*Are* they alike?" made it necessary for the children to take trips to see the differences. They returned with very definite observations and straightway set to work to evolve ways of embodying these. The

natural stream beds had to have irregular banks as well as courses, and yet "must hold water." The canals, flowing in man-made channels, must have straight courses and regular or even banks, and these too must be water-tight.

They began with the canals. After many trials, success crowned wooden troughs with enough waterproof cement in the bottom and at the ends to seal the joints. These were sunk in the earth on the lines shown by the floor diagram, or rather established again by comparison with the wall map, only a few landmarks having been kept distinct when the earth was put on the floor.

Then the irregular channels of river and creek were excavated and lined with ordinary cement. It proved necessary to line these further with a thin layer of the more expensive waterproof variety. Where these channels entered and left the city limits they were closed by shaping the cement as the circumstances required.

These waterways proved valuable for forcing home the facts of evaporation. Capillary attraction was also taught, though the term was not introduced. The children were eager to understand the occasional emptying of the channel much too fast to be accounted for by evaporation. Sometimes this was due to carelessness in bringing the earth along the banks too far up over the cement edges; occasionally, to the accidental leaving of a piece of cloth extending over the edge into the water. The refilling of the river, creek, and canals as often as need arose was considered a great honor.

The street cleaning department looked after the periodic scrubbing of the stream beds, for these bits of stagnant water were not overlooked by the Board of Health as among possible disease-breeders. One of the joys of the children's hearts was to construct boats of different form and materials and sail them on these waterways.

VICTORY CITY—A MINIATURE TRENTON
(The enclosing board in the foreground hides most of the river.)

3. Road Making.—The planning of this work was put into the hands of the department of streets and public improvements, the name of the department being enlarged at this time since the term which expressed its duties in the school city was too narrow to cover its share of building the play city.

"What streets shall be laid out first?" was the opening question. Having decided on making the main or most used streets, there were trips to see how each was paved.

Each kind of street was considered from three points of view: how it is made; why it is thus made; and how this sort of road first happened to be made. Dirt, gravel, macadam, woodblock, cobble, cement, and asphalt roads were the varieties studied. Each of these is found in or near Trenton, and all were represented in Victory City. Before the actual construction on the floor was begun, the details of the method were worked out on the sand table.

Much attention was given to the necessity of making a good road bed. Sand, gravel, and pebbles were freely used, layer upon layer, for this purpose. Care was taken to put a good crown in the road to secure effective drainage. The children made their own box for mixing cement; and the melting of tar for the asphalt construction was a difficulty triumphantly surmounted by these youthful city builders. The history of road development proved interesting and the children never tired of telling visitors how the coming of automobiles and the increase of heavy traffic had made the building of more substantial roads necessary. The writer feels sure that this experience will cause the children to notice the roads they travel on foot and in auto, wagon, or train, and will ensure their "carrying on" for good roads as they grow up.

After the roads had hardened and in some cases cracked, the department took up the question of keeping

the streets in good condition. The cracks were mended and a periodic sweeping and scrubbing was instituted. The girls in the grade were especially interested in this part of the work.

As soon as the main roads were completed the children made signposts of wood, upon which the street names were printed.

4. Bridge Building.—"But here is a road running straight up against the canal or the river. What is to be done?" Building bridges was of course the only possible solution of this problem—a solution suggested almost before the problem was faced, for many of these children had crossed such bridges every day of their lives.

The kind of bridge to be put up was settled by a trip to see the bridge at the corresponding intersection in Trenton. So there were built steel bridges (mechano toy construction), wooden bridges, and concrete bridges. There was even one drawbridge, the work of a very promising third-grade engineer, who planned and worked out its serviceable pulley arrangement without hint or suggestion. This bridge crossed the canal on State Street, the main thoroughfare from the school to the shopping district.

The concrete bridges were made in box molds, a piece of tin being bent to form the arch and placed lengthwise in the box before the concrete was poured in. When the mass had hardened, the sides of the box were broken away; in some cases the piece of tin dropped out; in others it stuck, owing to a little leakage of the cement over its edges.

During the construction work, pictures of world-famed bridges were shown to the children, and the evolution of bridges was studied, from the simple throwing of stepping stones into the water or the laying of a tree trunk across the stream, through the "grapevine" method of

linking the tops of trees on opposite banks, to the complicated structures of the present day.

5. *Publicity Work.*—While roads, waterways, and bridges were in building, other lines of activity were not overlooked. Early in the development of the project, the children of this grade, like those of the other two, decided to advertise their work and at the same time to brighten their section of the hall and cut off the possibility of interruption by passers-by. So work was started on a "city" poster, to be placed on the glass partition. This was a cut-paper affair, representing a night view of Trenton. Church spires, houses, the dome of the capitol, bridges, trees, and curling clouds of smoke—all in black and gray—were silhouetted against a background of lavender and purple, with numerous yellow or orange spots of light indicating the windows of factories and dwellings, and the electric sign, VICTORY CITY, glittering among the stars. The art work involved in working out this poster assumed many phases, involving varied principles and practical units of work. Beauty of form and massing in silhouette pictures were emphasized. Unfortunately, the colors used for this poster happened to be such that a negative of it could not be obtained, so it does not appear in the illustrations.

6. *Park Making.*—After the waterways, the streets, and the bridges were completed, the large and beautiful park was laid out. A trip to Cadwalader Park gave the class abundant ideas for making its monuments and other notable features, and resulted in their learning some of the local history connected with them, for example, Washington's crossing of the Delaware near Trenton. The Zoo was represented, its wooden cages holding plasticene animals. Grass seed was planted, and the park slopes finally came to need occasional mowing!

The placing of the park monuments suggested showing other historical statues or landmarks in the city. Accordingly Battle Monument and the Swamp Angel, the latter at the corner of the school campus, were promptly erected.

Another phase of park making came much later in the year, when the third grade's plot in the school garden became a city garden. In the center of the space assigned to this class, an oblong flower garden was laid out, red verbenas being planted to form a large V, white verbenas making a C, and blue a G. The remaining ground was divided into seven plots, each to be worked by the dwellers on one street of the school city. The vegetables grown in these seven gardens were sold to the domestic science lunch room in the Normal School, and the money added to a fund which was used finally to help pay for the refreshments for the Mothers' Party at the end of the year.

7. House Building.—"But Victory City has not yet a single inhabitant! What shall we do about this?"

"Make houses for the people," came spontaneously from the class, and the decision that each child should be responsible for making and placing his own house needed no engineering.

Each pupil now assumed the rôle of contractor and made plans and specifications for the building of his home. These houses were to be made of materials resembling as closely as possible those of their prototypes. Had these children come up from a first and a second grade in which the curriculum here outlined was in force, they would have found here an excellent chance for review of house construction and a saving of time for some phases of the work that were eventually crowded out of this year. As it was, brick, frame, and cement construction had to be studied *de novo*.

Plans were submitted, sizes worked out, locations decided upon, and the building operations actually started. Since it was difficult for the children to walk in the city without making serious work for the department of streets and public improvements, the houses were built on pieces of board or heavy cardboard and not placed in the city until they had dried and been painted.

New streets had to be laid out, in many cases, to permit the proper location of the houses. Each child built the street upon which he lived, if it was not already represented in the city. He was made responsible for the direction it took, the material it was made of, and its actual construction, but was allowed to enlist the help of any child whose home street had already been placed in the city. Children living on the same street of course shared the work. This meant a thorough review of road building.

About the time that this home-building began, the children, in their study of primitive life—described as section (d), beginning on page 129—began to organize the first act of the play which was to be given at the close of the year. This brought into strong contrast modes of living in the past and in the present. As they planned and constructed the "properties" for this play and built the miniature houses of Victory City, they drew many interesting comparisons between their own comfortable homes and those of primitive peoples.

The Erection of the Public Buildings.—One of the most valuable phases of the whole project was the study of public buildings, followed by the making and placing of those of Victory City. The need for such buildings was easily made evident as soon as homes were put into the city. Moreover, the class's readings in primitive history had brought to consciousness the necessity for some form of government as soon as a number of people begin

to live together. Thus the housing of the government agencies of Victory City was easily accepted as the next matter for consideration.

The Municipal Building claimed attention first, since it stands on the direct route from the school to the center of things down town. This suggested the building of the gilt-domed State House. Immediately there arose discussion and argument concerning the difference between city and state government, which resulted in emphasizing Trenton's importance as the capital of the state. A few of the children lived near the Court House, and they initiated the demand for a seat of the county government. So the main lines of difference of city, county, and state governments were drawn.

The other buildings which the class wanted to show are listed below, but space limits the account of the lessons in connection with each. Only a few of the more important sections of the work can be considered, and these but briefly. The list of buildings put on the board as suggestions came from the class read as follows:

1. Post office
2. State Normal School and Training School
3. One city school
4. Public library
5. Theater
6. Churches
7. Hotels
8. Banks
9. Railroad station
10. Garbage crematory
11. Reservoir
12. Power houses
13. Armory

The post office was studied in great detail and every child was taught how to buy stamps, to register letters, to send parcel post packages, special delivery letters, and money orders. The school city during this period established its own play post office, where all the transactions just named were carried on, blanks, cancelled stamps, etc., having been obtained at the city post office. This work

afforded ample opportunity for very practical arithmetic lessons. Drills in the form of post office games were very popular. The duties of the postmaster and the clerks were carefully studied.

While the Trenton Public Library was under discussion, the library of the school city was more definitely organized. The books were catalogued by the children. Librarians were appointed. The need for library rules was urgent, and a set of these was formulated by the class. Cards were made to be used in circulating the books. The children ran this library themselves. There were about sixty books in it, gathered by teachers and children, interesting books for third-graders to read. In addition there were what the children called their "home-made" books, which have already been described. (See page 111.) In spite of their unfinished condition, these were a very important part of the library.

In connection with this work, the children, in successive groups of four or five, were taken by the student teachers to the children's department of the public library, and practically every child became a reader of the books there. In this way the library habit was started.

While considering the construction of the hospital, a corner of the room housing the school city was fitted up with supplies for first aid—absorbent cotton, gauze, bottles of iodine, peroxide, and collodion, a pair of scissors, courtplaster, and a package of needles for removing splinters. These were kept in sealed packages and tin boxes, and the importance of not allowing them to lie exposed to the air was emphasized. The "first-aid station" was put in charge of the school city nurse and a municipal doctor was appointed to share her responsibilities. Their duties, in addition to the daily health inspection of the citizens, were to take care of the "first-aid" materials, to help the sick or injured in the first and the second, as well as

the third grade, and to take children with colds or other evidence of illness to the Normal School doctor and nurse.

The railroad station suggested trips to the children, so imaginary journeys for business or pleasure were taken by these third-grade citizens. Here was a fine chance for further map study of an elementary type.

"The theater" meant, for most of these children, moving pictures; and, while this building was under consideration, some interesting work was done on Robinson Crusoe, which the children were reading in connection with their study of primitive life. Large pictures were drawn on bogus paper, showing various phases of his life, and legends were written to accompany them, so as to form a scenario. For a time the room became the "State Street Theater." One by one, the pictures were held up and the legends read silently. At a later performance, to which the other two grades were invited, one of the third-graders read the legends aloud, unfolding step by step the development of Crusoe's life.

A study of the question of water supply involved the construction and placing of a fine "waterproof" reservoir.

An interesting phase of the work had to be omitted, to the children's great disappointment, because the necessary equipment, ordered the previous June, failed to arrive and the fact that the order had somehow become sidetracked was not discovered in time to get a new order through the necessary red tape. This was the lighting of the miniature city. The mode of carrying out this enterprise was thoroughly discussed, but the tiny bulbs were never strung up and made to glow by connection with the electric chandelier just over the city. The children were obliged to content themselves with the making and placing of the power house.

In this development of the public buildings, each child assumed responsibility for one building, and it was his

task to convince the class of the necessity for that building before the work on it was begun. The children became fine critics of one another. If the child who was presenting the case omitted important points or made false statements, there were usually two or three ready to call him to order.

9. Going into Business.—Now that the city life seemed to have started in earnest, it behooved the city folk to find some way of making a living. At first each child wanted to select a line of business and carry it on by himself, but a little guidance on the part of the teacher convinced him that he could save time and run a better business if he allowed the others to help. So each selected the kind of business he would like to *manage,* and all the children helped to develop it on a sort of coöperative basis.

(a) The Victory City Times.—One of the first enterprises started was a newspaper. A visit to the *Trenton Times* building kindled great enthusiasm, and it was not long before the manager had appointed his staff—editors, reporters, cartoonists, collectors.

Large sheets of real news print were given to the grade by the *Trenton Times* people. There were many disadvantages in using this: the sheets were too large to handle easily; it was unruled; it didn't take ink well. But nothing else counted so much with the children as the fact that this was the kind of paper used by the real *Trenton Times;* so they were allowed to use it. Columns were ruled, and in some cases lines also; this work was in itself good training. When a child proved himself able to write straight without lines he was allowed to do so, and this proved a spur to effort.

To make a characteristic heading, a simple city scene was cut on linoleum and used to stamp each paper. It was placed at the top of the sheet, in the center, with VICTORY printed on one side of it and CITY on the

other. News items of all sorts were "printed," events of interest going on in all the grades—the first three of course being most largely represented—and in the Normal School. There was a joke space, a space for recording absences, a column of personals. The different city departments often contributed important items, and advertisements of all sorts were inserted.

The paper motivated much of the work in language, spelling, and penmanship. It was issued only once a month because the labor of getting articles transferred from regular class papers to the news sheet was difficult to manage. Four copies formed each issue—one for the principal, one for the manager, one to be given to the person who worked hardest on it, and one for the file in Victory City library.

(b) The Victory City Pottery.—A tea set for first grade was the need which the pottery was established to meet. The children were taken to the plant where the beautiful and famous Beleek ware is made. This was a very special event, for few visitors are admitted to this art pottery. The children were allowed to see every department but that inner sanctum, the decorating room. This was denied, since the loss by any breakage after the final finish had been applied would have been double that caused by a similar accident in the earlier stages of the work—perhaps much more than double.

The pottery industry is one of the principal activities of Trenton. Since it employed the parents of many of the children, the location of the plants, the kinds of ware made in each, the need for different kinds, were studied in considerable detail. The clay, as well as the pottery, centers in New Jersey were discussed, a map being made for each. Some of these centers in other parts of the United States were marked on a large outline map. Pot-

tery centers were indicated by drawing a little cup or some other piece of china on each one.

Finally the Victory City Pottery was established, and work on the tea set was begun. Each child made one piece. Those who had proved themselves, in the building of the city, especially skillful in working clay, made the three large pieces, teapot, sugar bowl, and cream pitcher. The others made cups, saucers, and plates. The children carried their ware to the pottery, where it went through the firing with few accidents.

Much interest was shown in the art problem of designing a decoration for the tea set. All the children submitted designs and, after a class discussion, the matter was decided by vote. The design receiving the highest number of votes was a conventional border of orange and black units.

When the dishes were brought back from the pottery, the pattern was applied with crayola and covered with a light coat of shellac. Each child had the pleasure of carrying his own piece to the first-grade room and presenting it to the families. The manager of the pottery made the presentation speech.

(c) **The Furniture Factory.**—This was another of the industries studied in detail. There was a real need for a supply of extra chairs for use by the city clubs and by the whole class when it was desirable to have them sit around the little city during the development of new work. Why should not the city undertake to supply this demand? In order to enable the children to decide what sort of wood it would be best to use, specimens of different varieties were shown and tested as to their hardness and the finish taken by each. Relative cost and ease of working were considered before the choice was made.

A lumber camp was set up on the sand table, showing the story of the wood from the time it left its forest home

till it was ready for the hands of third-grade furniture makers. In writing up this story for the record of the industries of Victory City, the children added the steps which brought the wood to its final home in the third-grade chairs. Sources of wood were shown by indicating the chief lumber centers of the United States on a large outline map. The interesting method of pasting a pressed leaf of the prevailing kind of tree in the center of each area was made possible by the coöperation of the biology department of the Normal School.

The children studied the trees on the campus and on the streets near the school at this time. For their Arbor Day contribution, they tried to start a number of tiny trees in their city, by planting some willow twigs which had rooted in water in the schoolroom after their "pussies" had fallen off. A few of these lived, despite shallow soil and irregular watering; these were finally transplanted to the campus. The whole problem of growing trees in a city assumed a new interest to these children.

In discussing the form of the chairs to be made, the class decided that they ought to be alike, since they were to be used as a set. A simple mission design having been decided upon, the children worked out together the size and amount of stock needed for one chair. It was a pretty tough problem for them as an arithmetic class, to determine the total order. Each used his own method at first, and they showed intense interest in checking up each other's results and in discovering the shortest and easiest way to make the calculation. The order having been put in good form, the children became a class in English and wrote a letter to the head of the manual training department ordering the wood.

Each child assumed responsibility for the making of one chair. A screw construction was used and all the children learned to use the brace-and-bit, some of them

acquiring considerable skill. The finished chairs were stained brown. They proved invaluable to the little citizens. But at the end of school so many requests came from proud parents, as well as the children themselves to be allowed to buy the chairs, that it was decided to let each child have his own chair. This was enough to make even the least enthusiastic of the furniture makers feel fully repaid for his labor.

The following suggestion helped to impress the lesson of appreciation begun by the study of the growth of the trees and of the work of a lumber camp: "While you are working on your chairs, do not forget how many things had to be done to the wood before it reached you and how many men worked hard to prepare it for you. So do not waste it."

(d) **The Candy Kitchen.**—The last industry which time permitted the class to work out in any detail was the manufacture of candy—for this grade, like the others, failed to realize the full possibilities of the curriculum owing to the interruption of their work by the epidemic of influenza.

The motive for initiating this enterprise was the providing of sweets for the Mothers' Party, soon to come off. Candy recipes were brought by teachers and children, and submitted for class discussion and judgment. The factors of cost, food value, and ease of preparation formed the criteria for selection. At last a recipe was offered which required no sugar, needed no cooking, and contained more real food elements than any of the others. It called for raisins, nuts, and cocoanut, the three to be mixed, run through a meat chopper, and then made into balls. After the chopper was set up and the ingredients placed in dishes on the teacher's desk, every child *washed his hands* and helped in the preparing and grinding of the materials. Then the portion decided upon was rolled

into a ball and wrapped in one of the squares of waxed paper which had been cut beforehand. The children were sure no better candy had ever been made, and the mothers seemed to agree with them.

A candy song, based upon Field's "Gingham dog and calico cat" and called "The peppermint dog and the chocolate cat," was made to be sung at the party. Further preparation for this great event involved the decorating of paper napkins and plates, two very interesting fine arts problems. Lemonade and crackers were served, in addition to the candy.

The children calculated very carefully the cost of all this food, and paid for it out of a fund which they had started by selling the Thrift Stamp Jingle Books they had made, and which was augmented by the sale of the vegetables raised in the school city garden. This fund was administered by the city treasurer, who kept account of all items received and paid out. His books were audited much more frequently than is customary in "real" life, not merely because he was a very young and inexperienced accountant, but because the teacher wished to give the training afforded by this auditing to as many of the little citizens as possible.

All the problems arising in this business life, as well as those encountered in the work of constructing the city itself, resulted in very vital arithmetical training. Building operations involved frequent demands for measuring and ordering materials, for calculating the time spent and the wages due the workers, for determining relative proportions and sizes. Moreover, after the completion of each unit of work, the finance department had to meet the bills. There was one series of lessons in paying for roads, the cost of materials and the time spent being figured on, and bills being then made out, paid, and receipted. Paying for canals, bridges, parks, houses,

monuments, public buildings provided subject matter for other series. The usual drills in processes—such drills as are described in the account of first- and second-grade work—were given whenever a need for them manifested itself.

(d) The Study of Primitive Life

As soon as the city building began, the study of primitive history was started as a parallel interest. Book I—*The Seeds in Primitive Life*—of the writer's series, *How the Present Came From the Past,* was used as a guide. This work attempts to show children in a simple way the evolution of human institutions and of the commodities which now satisfy our needs and our desires, showing the origin of many familiar things and customs. So, while the little children built their modern homes in Victory City, there grew up on the sand table models of other homes—tree-top, cave, and hut—and life within these simple dwellings was compared with our own complex life. In this connection the children were greatly interested in reading and dramatizing Robinson Crusoe, and worked out an interesting sand-table story of his life. They frequently read the stories of primitive life given in the Dopp Books and searched eagerly for primitive myths and legends to add to those which form Part II of each book of *How the Present Came From the Past.* But the readers and other juvenile books which the clubs handled gave practically nothing but a few Indian tales.

As each chapter of their textbook was read, it was dramatized as one act of the play which was to form part of the pageant closing the year's work for the three grades. The preparation for this pageant was in itself a valuable phase of the year's school life, and in addition furnished unforced motive for much of the other work. The scenery to be used, and ways and means of making

it in those times of high prices and scarcity, formed the subject of many thought-provoked and thought-provoking talks. Many of the suggestions in the "Can you?" sections of the book were carried out by individuals, by groups, or by the class, and any of the products which would serve as "properties" were used in the rehearsals and kept for the final production. So when June came, message sticks, bull-roarers, boomerangs, marked stones, forms of pottery, skins for clothing, were ready for use. This incidentally saved much time, nerve-strain, and hasty, ill-done work in the last days before the great event.

As the play was built, it was written out on the board and the teacher copied each installment for future reference. The children did not memorize their parts, but made their own speeches each time the play was rehearsed. Indeed, up to a certain point, different children played each rôle in successive rehearsals. When the teacher was satisfied that all the children had got all the training possible under these conditions, the actors for the final performance were selected, or rather elected. At this stage of the work, each child began to make his own copy of the play, to be used in the last review in June. The citizen who produced the best version—for the speeches never became definitely "set"—legibility and neatness being also taken into account, was allowed to copy the act in which he had excelled in the book of "The Primitive Play" intended for the city library. The whole play would probably form wearisome reading for adults. The "argument," or general movement, is clearly outlined in the "Can you?" material already referred to, and the transmutation of these suggestions into the details of childish form is sufficiently indicated in the acts given in the Appendix.

Making scenery became a major art problem late in the spring. Sheets of heavy paper, nearly three yards

long, were used, anything more permanent being too expensive. Huge trees of the primitive forest were drawn on separate sheets, after preliminary practice on the ordinary drawing paper. These were colored with crayola, and were finally cut out, to be mounted on a wooden skeleton in such a way as to stand alone. Some of these drawings, ready for this final treatment, may be seen in the picture of Victory City facing page 114, thumb-tacked against the blackboard. This means of preserving the drawings unrubbed served until the play drew near enough to warrant cutting out and mounting the trees, for there was no available space for storing them in this bulky and rather unstable form. These trees formed the wings and middle ground of the stage setting. In their branches the Tree Family was supposed to have its home, a convenient stepladder being concealed behind a clump of trees.

The class drew, as a background for the stage, a huge primitive forest scene, showing a stream of water, rocks, bushes, flowers, birds, and four-footed animals. This picture was so large that the paper had to be fastened up on the wall of an unused room, and the children stood on chairs to work on the tree-tops. This problem proved beyond a doubt to those who saw the scenery in the making, as well as in its finished state, the value of providing opportunity for a very large and free type of expression.

The tree-dwellers' costumes were made of ecru cotton cloth, cut into fringes at the lower edges. On these simple tunics, cut and made by themselves, they drew vivid green branches and leaves. The teacher helped the monkey child to plan and cut his close-fitting garment of this same cloth. A later act represented the use of animal skins for clothing. These skins were cut from burlap, and on them were painted the tiger's stripes, the lion's head, the leopard's spots. Some of these were so wrapped around children who went about on all fours as to make

them animals for the occasion. One or two skin rugs were borrowed for the final performance. An elephant's head, with formidable tusks of white cardboard, was made from gray muslin, stuffed, and adjusted to peep from the cave home. This was constructed of boxes loosely piled up and roughly covered with crumpled gray paper to imitate rocks. A snake made of old black stockings, foot and toe being converted into a fairly realistic head, hung from one of the trees.

(e) The Closing Inter-grade Pageant

Since it seemed impossible to give even an inadequate résumé of a year's work in one act, it was decided to have three "episodes," one for each grade. The first of these, Primitive Family Life, was given by the third grade; the second grade came next, with The Assunpink Tribe's Corn Festival; while A Modern Family Reunion, by the first grade, brought the story up to the present time.

The first episode represented the growth of civilization through the hut-dwelling period. The opening scenes are given in the Appendix, page 324. After the third-grade children had shown man in the tree-tops, his finding ways and means of killing and using animals, his discovery and use of fire, his moving into cave homes under the spur of changing temperature, his meeting with migrating hut-dwelling tribes whom he teaches and from whom he learns, they retired to the back of the stage and stowed themselves away as compactly as possible while the second grade filed on for the next episode.

Some of the Assunpinks wore the conventional Indian costume, but most of them represented Corn Spirits and were decked with green, and orange crepe paper to suggest ears of corn. The festival represented the gathering of the tribe, followed by the planting and harvesting of the corn with the accompanying prayers to the Great Spirit,

A SCENE IN THE CLOSING PAGEANT

songs, dances, and games. Some of these had been given to the children, in simplified form, from an authoritative work on Indian festivals, so as to lead them into the spirit of the occasion, but many of them were made by the class, to adapt the festivities to this particular tribe. Their act finished, the Indians retired behind the trees or hid in the caves during the first grade's contribution. (See picture facing page 132.)

The third episode was a simple playing out of family life in the preparation for a reunion, and a representation of the party itself. One of the families set the "scenery," arranging the furniture in the center of the stage, cleaning and dusting the sitting-room thus formed, and putting on the final touch by arranging the flowers in the pretty Indian bowl in the center of the table. The second family then appeared, to act as hosts. The third family called and were entertained by conversation, music, and dancing. Then the fourth family came in, bringing the pretty tea set which third grade had made earlier in the year, arranging the table, and serving tea and cakes to the guests. The food having been eaten, the fifth family removed the dishes and rearranged the table. Then the families, supposedly proceeding to the piazza for the evening, walked off the stage, followed by the Indians, the "wild people" bringing up the rear.

One of the last group stopped long enough to make a speech, inviting the mothers of the children of the three grades down to the city room for refreshments. This room wore a festive dress, all the children having worked with a will to clean it up, clearing away all tools and all the work except some of the best—which was left for decoration and for the delectation of fond parents—covering all surfaces with white paper, and arranging the food on the tables, using the plates, cups, and napkins which had been decorated for the occasion.

Lemonade, crackers, and the candy made by third grade having been duly enjoyed, the year's work was ended by distributing among the children most of the things which they had made. Houses, bridges, monuments, even the streets and the canals, were carried out of the city by their proud creators. The store was likewise rapidly demolished and its stock scattered among the coöperating proprietors. Each of the first-grade children was allowed to take his or her doll. The houses were carried off by groups of children living near enough to one another to make it possible for them to play together during the summer. One house was given to the kindergarten, along with the cherished tea set.

Thus ended the happiest year the writer has ever spent in the schoolroom; and she has reason to believe that nearly 100 per cent. of the children were just as happy. It is hard to state all that they learned. The outcomes listed in Section IV, however, give some idea of the scope of the project, and show what was taught. Whether every one of these facts, habits, skills, attitudes, appreciations, ideals was learned by all the children cannot be any more definitely proved than can the learning of what is taught under other types of curriculums.

SECTION II

THESES UNDERLYING THIS CURRICULUM AND AN EVALUATION OF EACH

THESES *

1. Since play is essential for the maximal development of the child, this fact should be definitely recognized in the organization of a curriculum. (page 138)
   (*a*) Forced activities, either intellectual or motor, are not educative in the fullest sense and often result in fatigue. (page 142)
   (*b*) Play eliminates the necessity for forced effort, making school work truly educative for teacher as well as child. (page 143)
   (*c*) The spontaneous play of childhood frequently imitates the activities of adult life. (page 143)
2. Life necessities and comforts are sufficiently significant to be made the basis for a curriculum. (page 146)
   (*a*) Human relationships in family, local community, country, and finally the world, supply the subject matter for such a curriculum. (page 148)
   (*b*) In any locality, the details of these relationships, wisely chosen and articulated, will organize the life of the school. (page 154)
   (*c*) A study of the origin, production, and processes of manufacture of the child's life necessities and comforts will not only develop a sympathetic appreciation of the inter-relations of society, not only lead to a wise selection and use of the articles themselves, but will also afford a better medium for the teaching of the three R's and the other tra-

* For evaluations, see pages indicated.

ditional subject matter than is found in the conventional school. (page 155)

3. These ends can be best attained by the child's *playing out* the experiences of the family, the community, and the world. (page 157)
   (*a*) The first grade may be organized into a number of families, and family life may be imitated in the schoolroom.
   (*b*) The second grade may, in a city, keep a department store to furnish necessities and comforts to the families of the first grade and to function in the life of the third grade. In a village or rural school, a number of unit stores, or a "general store" may be kept.
   (*c*) The third grade may become a miniature city or village.
   (*d*) National and international relations will organize the work of the next three grades, but the experiment described in Section I was necessarily confined to first, second, and third.

4. Such playing out of life institutions in school will organize the subject matter of language, arithmetic, history, geography, physical education, industrial and fine arts (including music) in such a way as to establish maximal as well as minimal essentials of the curriculum. (page 162)

5. A curriculum thus formed will insure unforced motivation, thus relieving the pressure of method. (page 164)
   (*a*) Such an organization will bring about natural correlations and prevent disjointed work. (page 167)
   (*b*) Such an organization will allow for individual freedom, initiative, and originality. It will help the child to discover his own aptitudes and abilities, and will afford the teacher

effective means of training these aptitudes and abilities. (page 170)

(*c*) Since the work of each grade will require the repetition and enlarging of the subject matter of the preceding grade, drill in content is provided without special mechanism, while the necessary drill in processes may be made either an integral or a related part of the project. (page 172)

6. School rewards and punishments will parallel those of real life, since individual success in this play life involves group as well as individual satisfaction; while failure brings group disapproval which spurs the individual to renewed effort or induces him to choose another line of activity. (page 175)

7. While a special plant is desirable for this sort of school, the new organization can be begun in a building of the ordinary type and at moderate expense, since the children can furnish much of the initial equipment and can make more and more of it as the organization develops. (page 178)

8. A curriculum built on projects duplicating life experiences, and widening as the experience of the child widens, creates or fosters in teachers a live interest in their profession and promotes their personal as well as professional growth, as the more formal curriculum seldom does. (page 179)

(*a*) Such a curriculum is of special value in Training Schools in order that the student teacher may learn to handle life-wholes. (page 180)

(*b*) Such a curriculum is a valuable means of professionalizing subject matter by furnishing a hub, as it were, from which the so-called academic subjects of the Normal School curriculum may radiate. (page 181)

EVALUATIONS

Thesis 1. Since play is essential for the maximal development of the child, this fact should be definitely recognized in the organization of a curriculum.

Few would willingly deprive children of play. In the opinion of the great majority of grown-ups, some play is a necessity for every child; rarely, if ever, is it denied that "All work and no play makes Jack a dull boy." But rarely, too, is it thought that play has any important place in school; least of all, that it may be the mainspring of school work. Some parents, moreover, seem to feel that a good fairy, if not a guardian angel, hovers over children at play so that they need no human supervision to prevent injury to body, mind, or spirit. Others reason that there is no occasion to worry about how children play, for any bad habits they may acquire while playing will soon be overcome by abundance of good, wholesome, steady work in school. That schools are places where children work, that play is justified only outside of school hours, except for very limited periods and on very special occasions, are hoary traditions whose force is still binding in most places. But Dewey's position here is unmistakable. The italics in the following quotation are the writer's:

"Experience has shown that when children have a chance at physical activities which bring their natural impulses into play, going to school is a joy, management is less of a burden, and learning is easier. Sometimes, perhaps, plays, games, and constructive occupations are resorted to only for these reasons, with emphasis upon relief from tedium and strain of 'regular' school work. There is no reason, however, for using them merely as agreeable diversions. Study of mental life has made evi-

dent the fundamental worth of native tendencies to explore, to manipulate tools and materials, to construct, to give expression to joyous emotion. When exercises which are prompted by these instincts are a part of the regular school program, the whole pupil is engaged, the artificial gap between life in school and out is reduced, motives are afforded for attention to a large variety of materials and processes distinctly educative in effect, and coöperative associations which give information a social setting are provided. *In short, the grounds for assigning to play and active work a definite place in the curriculum are intellectual and social, not matters of temporary expediency and momentary agreeableness. Without something of the kind it is not possible to secure the normal estate of effective learning; namely, that knowledge-getting be an outgrowth of activities having their own end, instead of a school task.* More specifically, play and work correspond, point for point, with the traits of the initial stage of knowing, which consists . . . in learning how to do things and in acquaintance with things and processes gained in the doing." [1]

One great reason for the usual attitude toward play has been a misunderstanding of its cause or origin and its true significance; another, a confusion as to the types of action that are included under the term "play activities"; still another, the fact that play environments may differ so greatly. Furthermore, most psychologists are misleading in that they include play in the list of instincts, treating it as a form of activity apart from the manifestations of any of the other instincts. But Thorndike says:

"Man has not two original natures—one matter of fact, the other playful—from one to the other of which he shifts by inner magic. *The majority of the original tendencies from which human play develops are not peculiar to play, but originate serious activities as well.* Such are

[1] Dewey—*Democracy and Education*, p. 228.

manipulation, facial expression, vocalization, multiform mental activity, and multiform physical activity. The same original tendency, manipulation, is the root of making mud pies and apple pies." [2]

Some teachers, like some parents, still consider schools as prisons where children are made to do the things they least want to do, where they learn the things they least want to learn, and above all where they are "made to mind," where they "toe the mark." Between such a teacher and her children towers a wall, unsurmountable and impenetrable. Should any teacher, becoming convinced of the value of play, manage to climb over or break down this Chinese wall, she is often accused of using "soft pedagogy" and "sugar-coated" methods. And she may deserve the criticism, for the education which says, or at least assumes, that the child should do nothing that he doesn't want to do, that he must be left free to play or work as the mood takes him, that he may violate all rules of social behavior since he is merely following his native instincts when he pokes and shoves and breaks and vocalizes—such education may be worse than that which dictates and demands and compels. How, then, can the curriculum of the schools reconcile the apparently contradictory beliefs that children should be allowed to play in school and that they must be trained to good habits of work? In addition to the statements just quoted from Thorndike, there are certain others given by Appleton and Bobbitt which seem to point the way to a solution, or at least to make it impossible for the conscientious teacher to neglect play as a fundamental element in the planning of activities for children.

"Any system of education which leaves out of account the 'hungers' of the child, both physical and psychical,

[2] Thorndike—*Educational Psychology*, Vol. i, p. 145.

leaves also out of account his whole development. The play-hunger is but one of many. . . . Some of these normal hungers are indicated in the analysis of children's play—hunger for exercise, for social appreciation, imitation, organization, sensation, rhythm, self-training, competition, coöperation, fun, intellectual activity, companionship, and religion. . . .

"In children between three and seven there is little differentiation between play and reality." [3]

The child's nature, then, demands playful realities for his educational diet. Miss Appleton further says:

"In children from seven to twelve dramatic and the social imitative elements are strong. At this age the end of play becomes more remote than in the previous group and there is a beginning of social organizations." [4]

One may, then, at this period begin to change from the play-level to the work-level and may take advantage of the current of interest by encouraging group organizations and the exercise of the dramatic, social, and imitative types of activity.

"Play is Nature's active mode of education. . . .

"Physical play is Nature's physical education. . . .

"Social play is Nature's active method of social education. . . .

"Mental play is Nature's active method of filling the mind with information." [5]

Provision, then, must be made for these four types of play experiences if we would follow the path which nature has marked out for educating our children.

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[3] Appleton, L. Estelle—*A Comparative Study of the Play Activities of Adult Savages and Civilized Children*, pp. 32, 26.

[4] *Ibid.*, p. 27.

[5] Bobbitt—*The Curriculum*, pp. 8, 9.

"Seen biologically, children's play was—and is—the most serious function of childhood. It was then—and to-day should be—the largest factor in the child's education. . . . The artificial conditions of modern life will make a large amount of conscious guidance necessary." [6]

Since the driving power of the play tendency is so strong, parents and teachers must not leave the direction of this tendency to chance. Indeed, it is the chief business of education to use this electric current economically, turning it into channels of usefulness and beauty that it may yield products of social and artistic value.

If these arguments concerning the worth of play in the education of a child be valid, then the corollaries of the first thesis must be true:

"(a) Forced activities, either intellectual or motor, are not educative in the fullest sense and often result in fatigue."

Forced activity spells drudgery for the adult and even more so for the child, to whom the ultimate benefit cannot make the same appeal. The play-hunger lives on in the individual in spite of imposed tasks, and if no legitimate avenue is provided for its satisfaction it will find food, good or bad, somewhere, somehow, as surely as water runs downhill. Consequently, in school situations where play is denied adequate expression, education becomes negative in the sense of impelling children to be disingenuous, underhanded—to form bad "habits of mind." Such facts as they learn, probably only for the time being, they acquire because the teacher pushes them along that line of greatest resistance whose name is drudgery. But attitudes and mind-habits they learn, probably for all time, because nature leads them along that line of least resistance whose name is play.

[6] Bobbitt—*The Curriculum*, pp. 217, 221.

"(b) Play eliminates the necessity for forced effort, making school work truly educative for teacher as well as child."

Play, by breaking down that Chinese wall of misunderstanding, would mean not only the removal of much friction but the development of sympathy, a prerequisite for any wholesome school life. Moreover, if play is a primary factor in building up the curriculum, the children will, in a sense, unconsciously point out the way. The resulting benefits to the children have already, perhaps, been sufficiently shown; those to the teacher will be more fully considered under Thesis 8.

"(c) The spontaneous play of childhood frequently imitates the activities of adult life."

One has but to watch children at play to discover that whenever they are not engaged in "set" games they are usually dramatizing adult experiences. And the pathos of the situation is that they mimic the bad perhaps more frequently than the good. Yet since they are only playing, we think they may "touch pitch and yet not be defiled."

Quite recently the following scene was witnessed. A little girl with her doll was "playing school." The doll was the erring pupil, the little girl the teacher. The doll was seized violently and stood up in a corner of the doorway, face to the wall. The passer-by caught this sentence, severely pronounced, "There, now, for not knowing your lesson, you may stand in that corner all day!" This child of seven, perhaps a future teacher of children, was building into her subconsciousness standards for her life work!

Little girls who do not "play school" out of school hours almost always "play house." How often do the busy little mothers stop their cooking, their sewing, their care of the baby, to scold or to whip the older children!

How hard children will joyfully work in constructive

imitation of adult activities was beautifully illustrated by a boy about eight years old whom the writer watched from her fifth-floor window. After running his roller coaster up and down the sidewalk aimlessly for a while, he suddenly dismounted and drew a chalk line from the park fence to the curb—a destination! Then he drew a straight track, perhaps ten yards long, leading up to this line, showing ties as well as rails. After running his coaster up and down this track several times, he drew a second length, starting it parallel with the first at the straight line, putting in several curves, and laboring long where it crossed the straight track, erasing and redrawing repeatedly to make the crossing look as he thought it should. Then he rode several times over each track, but seemed much troubled when it came to getting from one to the other. After trying several ways of manipulating his coaster to accomplish this, he finally laid it aside and drew a semicircular connecting track, carefully adding a "third rail" to the whole. Trying this and finding the curve too sharp to permit him to get around it smoothly, he erased it and sketched in a wider sweep. After riding in triumph from one end to the other several times, he went off—probably in quest of more worlds to conquer—having spent half an hour in planning and building his track and two minutes in riding over it when all the difficulties had been mastered.

A fine example of the playing out of group experiences was seen during the recent war. A party of boys, of all sizes and all ages, congregated on an open lot and organized a miniature battlefield, caring for the wounded after the fighting was over. Some very minute details of the situation were carried out; for instance, the doctor searched his pockets for paper and pencil to record the last words of a dying soldier, whose sympathetic comrades had pillowed his head on a big stone.

The Red Cross activities of the girls at play during this period also illustrate the point that children are often more interested in playing out real organized social experiences than in either the hit-or-miss type of free play which so often leads into fooling, teasing, and bullying, or in the set plays or games inherited from dim antiquity. All that is needed to start this higher type of play which involves imaginative planning and careful manipulation of material, is the spark of suggestion or encouragement, be it in the form of a war, an exceptional teacher, or the school curriculum. The first, let us be thankful, is over; the second cannot be counted on; but the third is always with us.

It seems nothing short of absurd for us to close our eyes to these suggestions for children's growth and development, which they themselves are constantly giving us. Long, long ago teachers and parents said, "Educate for the future." We now say, "Educate for the future, but do not let the children know that you are doing it." But the child himself, in his very play, looks to that future life. He plays "being grown-up" even before he can walk steadily. Why not cater to this interest, and help him *through play* to duplicate these social situations in a very simple, childish way, seizing the countless incidental opportunities to develop good habits, attitudes, appreciations, skills, and at the same time and under the same motive power teaching him to read, to write, and to cipher?

In reading the exhaustive studies which have been made of the play of primitive peoples, it certainly is of great significance to education to find them agreeing that "all savage play had its genesis in actual experience," as Miss Appleton puts it.

Professor Bobbitt says that children and youth, impelled by curiosity and the play motive, should wander

through every important field of human knowledge and human experience. Now let us consider how the curriculum can make this wandering possible and at the same time make sure of the "minimal essentials," if the arguments given above convince us that we have here the first step in the development of a scientific technic for curriculum making.

"Thesis 2. Life necessities and comforts are sufficently significant to be made the basis for a curriculum."

"All little children have certain common needs." [7] Dewey says that the material making up the curriculum must be "translated into life terms," [8] and again that "a curriculum which acknowledges the social responsibilities of education must present situations where problems are relevant to the problems of living together, and where observation and information are calculated to develop social insight and interest." [9] Bobbitt's statement, while more general, is just as strong. "The program . . . will be as wide as life itself." [10] And Bonser gives the specific principle, "The curriculum of the school should represent the needs and interests of present-day life in our own immediate environment and the world at large." [11]

What, then, are these "common needs," these "life terms" into which subject matter must be translated, this "program" which must be "as wide as life itself," these "needs and interests of present-day life in our own environment and the world at large"?

There seems to be but one answer to this question—those necessities and comforts common to the life and well-being of *every living individual,* whether young or

[7] Flexner—*A Modern School,* p. 7.
[8] Dewey—*The Child and the Curriculum,* p. 31.
[9] Dewey—*Democracy and Education,* p. 226.
[10] Bobbitt—*The Curriculum,* p. 43.
[11] Bonser—*The Speyer School Curriculum,* p. 1.

old, rich or poor, Jew or Gentile, dweller in sunny climes or in frigid regions. These may be listed under the main heads of physical needs—food, shelter, and clothing—and social needs—work and play.

For the purpose of illustration let us think of the curriculum as the educational recipe whose function it is to interpret the environment—to make it real, somewhat as cookery recipes enable us to make real the dishes which they describe. True it is that one may cook without recipes. So is it true that one may teach without a formulated curriculum. But as in such random cooking there is great danger of too much saltness or too much sweetness, of tough waffles or "sad" cakes, so in teaching without a curriculum which defines and limits possibilities, there is grave danger of too much reading-ness, too much nature-study-ness, or perhaps even too much play-ness.

The well-balanced curriculum, then, will select and mix judiciously those facts from the environment which are the basic ingredients of the educational recipe. These will be certain rather definite bodies of knowledge concerning food, clothing, and shelter which are absolutely essential to make every individual, first of all, an intelligent consumer. In the days gone by, when homes instead of factories were the source of supplies, when the hands of production were human instead of automatic machines —when the wool in the girl's dress was sheared, carded, spun, and woven on her father's farm, when the boy saw the making of his shoes from start to finish—then the educational issue was different, for the economic issue was very unlike that of the present. Then the materials of education might well be chosen along less practical lines, and more direct methods might be employed to give the individual the so-called cultural subjects.

The economic struggle of to-day forces a shifting

of emphasis to the more material things of life. The issues of society must inevitably become the issues of the school if school is to be a place in which to *live,* not merely to study. The school curriculum, therefore, must open up to the child the mysteries of the tremendously complex industrial world—the gigantic product of modern civilization. The child must know the facts of production in order to live decently. He must also know these facts in order either to join the ranks of the producers to their and his own best advantage or to do justice to the producers in other fields than his own.

Will it satisfy our educational recipe, then, to have John and Mary able to trace their lump of sugar back to its home in the cane or the beet? This ability is of less importance, perhaps, than an understanding of the reason why before the war we paid six cents per pound for the same product which now costs thirty cents. The story of the difference between six cents and thirty cents in this case will be a carefully worked out problem, rich in the elements which intelligent teaching of these facts of life must always carry with it—appreciations, attitudes, sympathies—and functioning in action of a wholesome constructive type. With such material forming the bulk of the curriculum, children will pass into adult life better consumers, better voters, better producers, whether by their labor or by their capital.

"(a) Human relationships in family, local community, country, and finally the world, supply the subject matter for such a curriculum."

The next question which will probably be asked is, "How shall we choose from this tremendous mass of possibilities the subject matter for each grade?" What large social units shall be selected as the touchstones? How can we manage not to "eddy round and round" as William T. Harris has said, "and never come to

any consistent system or reach any practical success?" [12]

Dewey has said that modern civilization is too complex to be assimilated *in toto* by the child. It must be broken up and administered piecemeal, as it were, in a gradual and graded way. He therefore believes that the first duty of the social organ which we call the school is to furnish a *simplified* environment, by selecting such features as are fairly fundamental and capable of serving as stimuli for the young. Our question, then, becomes, "How can the social environment be dissected for the child in such a way as to provide for a gradual unfolding of the whole, without unnecessary overlapping or duplication?" There would seem to be no doubt as to the proper starting point, however we may differ in opinion as to the order of the later steps. For the most familiar, the closest, environment of the child is the home. Few indeed are the children to whom home is not the immediate source of all things, and fewer still are those who have absolutely no home.

Ask the five- or six-year-old who gives him food, clothing, home, and he will answer, "Father and mother." To him the home supplies all needs. True it is that he has had some acquaintance with the store as a source of supply; but up to the time he goes to school his store experiences have been few, his home experiences manifold. In answer to the question, "Why further emphasize the situations which are already familiar, instead of beginning at once to broaden the child's experience?" the following quotation is most pertinent:

"The school . . . selects the features (of the environment) which are fairly fundamental and capable of being responded to by the young. Then it establishes a progressive order, *using the factors first acquired as means of gaining insight into what is more complicated.*"

[12] Harris, W. T.—*What Shall We Study?* p. 1.

This, then, is the first reason. Further:

"It is the business of the school environment . . . to establish a *purified* medium of action. . . . By selecting the best for its exclusive use, it strives to reinforce the power of this best. . . .

"In the third place, it is the office of the school environment to balance the various elements in the social environment, and to see to it that each individual gets an opportunity to escape from the limitations of the social group in which he was born, and to come into living contact with a broader environment." [13]

This third reason seems most vital. When one realizes the variety of homes which the children of our public schools represent, when one realizes the low standards of living which obtain in many of these homes, one is impelled to plead that through the school some uplift may come into the home, in order that the immediate environment of many children out of school hours may be purged of unwholesome, even immoral, influences. Moreover, the home environment of rich children is, in its way, as narrow as that of the poor, and a broadening of it in school might benefit parents as well as pupils.

Even the six-year-old may help in this work of improving the home. Living through home experiences in school, the child will establish habits, some of which, at least, will carry over into the home. In this way he may to some extent "escape the limitations of the social group in which he was born" and at the same time improve, in a small way, the environment of the group itself.

To quote Dewey again:

"The business of the educator—whether parent or teacher—is to see to it that the greatest number of ideas

[13] Dewey—*Democracy and Education*, p. 24.

acquired by children and youth are acquired in such a vital way that they become *moving* ideas, *motive* forces in the guidance of conduct."

"The school cannot be a preparation for social life excepting as it reproduces within itself typical conditions of social life. At present it is largely engaged in the futile task of Sisyphus. It is endeavoring to form habits in children for use in a social life which, it would almost seem, is carefully and purposely kept away from vital contact with the child undergoing training."[14]

The writer then has made the break as gentle as possible for the first grade—that grade which initiates the child into the mysteries of life away from home—by creating a home or family environment for him in school.

For the child in the second grade, the store has become a vital factor in life. By this time he has had a number of experiences in actual buying. He "goes to the store" for mother and for neighbor. Perhaps after school he delivers goods for the corner grocer or helps in his own father's store. Up to this time the child has been interested in money primarily because it buys him candy and toys, but the seven- or eight-year-old boy begins to take pride in saving for his own suits or shoes such money as he receives. He is allowed to express some choice in the buying of his clothes. He is entrusted with money when he goes to the store for provisions and is allowed to bring back the change. He carries the list in his head rather than on the paper, which in the case of the five- or six-year-old buyer encloses the exact amount of money for the purchase. In a word, the seven- or eight-year-old child takes a step out into the world as a youthful consumer. The curriculum should seize the opportunity of this new interest in the source of materials outside of the home; therefore the store has been chosen

[14] Dewey—*Moral Principles in Education*, pp. 2, 14.

to organize the life of the second grade. The psychology of the situation, the immaturity of the child's mind, must determine the scope of the work. How this may be done the detailed account of the plan in Section I has shown.

By the time the child lives through the numerous experiences of planning, building, and stocking the second grade's store and carrying on the various phases of the business, he arrives at an age when he appreciates broader human relationships. He becomes less self-centered. Parents allow him more freedom outside of his home. He makes friends with the milkman, the street cleaner, the traffic "cop." He haunts the fire engine house. He watches the repair work along the street. He takes a keen interest in the new building going up in the neighborhood. He steals away to the factory to see the machinery. He spends his last nickel for the top gallery at the movies. Church or Sunday school means his good clothes, new companions, music, and stories. Further, it may give him facts or ideals concerning that unseen religious life which he may be beginning to sense and respect; if he is of a different type, it may stand for nothing more than an occasional picnic, or the candy and oranges of the Christmas festival.

All these interests taken together spell city or village life for the child of this age, the eight- or nine-year-old, and the curriculum can make sympathetic provision for these interests in the way outlined in Section I for the third grade.

Up to this point, the organization of school life here described has actually been tested out by the author—in the third grade for two successive years, in the first and second for one year. Her scheme, however, includes the curriculum up to the junior high school.

After experiencing the various activities of these first three years in school, the child cannot help but realize

that the world is wider than his home city or the nearest village. In his playing out of home, store, and community life, he has met the teas and silks of Japan and China, the coffee of Brazil, the gold of Alaska, the diamonds, ivory, and ostrich plumes of Africa, the toys of Germany, the cheese and cocoa of Holland, the knives and scissors of England, gowns and hats from Paris. He has gradually wakened to the fact that he and his fellow-citizens, both children and adults, live not unto themselves alone. With this consciousness should come the child's definite introduction to the other peoples who contribute largely to his existence, his health, and his happiness. So the fourth year of the child's school life may well be spent playing "a year's trip around the world," working and playing with foreign peoples. This grade will give him a speaking acquaintance, as it were, with some of the past as well as the present inhabitants of the countries visited, thus continuing the work in history begun in second and third grade.

During his year's journey around the world the child will have made frequent comparisons between conditions abroad and in his own land, and many questions will have been raised about regions of this country which he has never visited. So the fifth year may well be spent in "seeing America." This would be an excellent place to try out the educational films which are now in course of preparation, since the fifth-grade child reads rapidly enough to take in the legend before the picture appears. To vary the monotony and to give more opportunity for motor activities, the places, processes, or events for which films are not available may be worked out by the children as living movies or moving tableaus, so that we may call this year's play-work, "Seeing America through moving pictures."

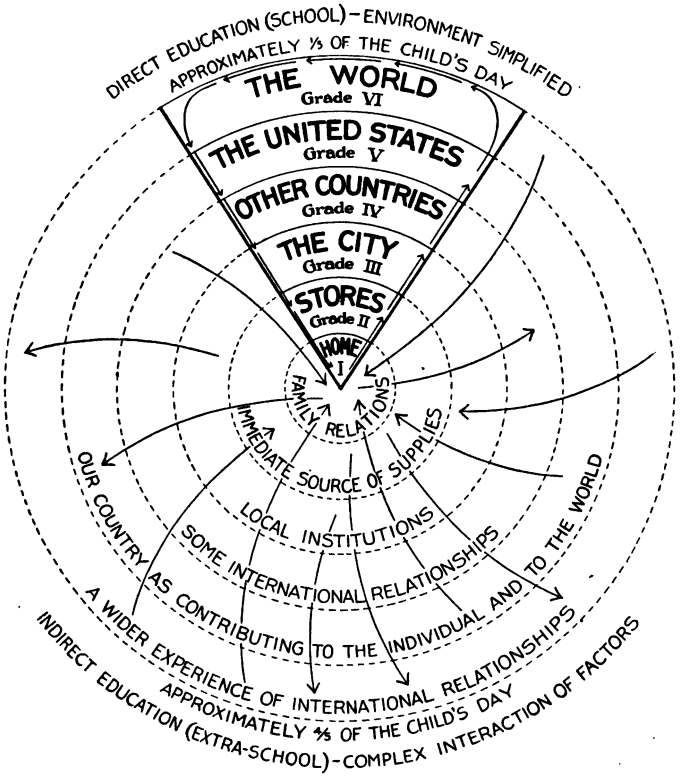
The sixth grade finds the child ready to penetrate

more deeply into the lives of other nations as well as into those of his nearer neighbors, so world relations are emphasized in playing "a world's fair." This year's work will then be a summary of all that has gone before, with interpolations and the addition of many details. So the individual passes from this grade, having gained not only the fundamentals in tool subjects, but a foundation of life-experiences, so to speak. It is the writer's belief that he is better prepared to take the next step toward intelligent and worthy participation in adult life than if he had spent these six years in the conventional public school.

"(b) In any locality the details of these relationships, wisely chosen and articulated, will organize the life of the school."

That the basic relationships just outlined as organizing the work of each grade will lead the child out into larger and larger horizons, the school being an integral sector of the perfect circle, life, may be roughly represented by the diagram facing this page.

The details of subject matter to fill each year's arc of this sector must now be considered. It is here that opportunity is afforded for originality and initiative on the part of both teacher and children. It is here that local coloring and most effective motivation may be given to the work. The fine art of the individual teacher will lie in using the suggested curriculum in any locality in such a way as to make sure (1) that the so-called "minimal essentials" are taken care of; (2) that the facts which each individual must know concerning his life in a social group, and which are comprised in what might be called the five F's—food, fabrics, firesides, friends, fun—are provided for; (3) that the desirable habits, attitudes, appreciations, ideals, shall be attained through the only media whereby they can be maximally developed, *i.e.*, organized relationships in school which duplicate relation-



THE SCHOOL AS A SECTOR OF LIFE

ships outside of school. To attain these ends, the activities of each locality—whether city, village, or country—and the facts of existing relationships should determine the details of subject matter.

"(c) A study of the origin, production, and processes of manufacture of the child's life necessities and comforts will not only develop a sympathetic appreciation of the inter-relations of society, not only lead to a wise selection and use of the articles themselves, but will also afford a better medium for the teaching of the three R's and the other traditional subject matter than is found in the conventional school."

Why do you and I need to read and write? Why do we need to know some of the facts taught to us as arithmetic? Why study geography? Do we use these skills and knowledges for the purposes for which the studies were placed in the curriculum by the school of thinkers that advocated culture as the first aim of education? Listen to one of these:

"Arithmetic opens a window of the soul directed outward upon the inorganic phase of the world. It notes the abstract relation of all existence to mere time and space."

And of geography the same writer says:

"He learns a new vocabulary in studying geography; a long list of technical terms is necessary to describe the essential matters of man's environment. Geography undertakes to show the relation of each place to all others. After he has acquired some knowledge of this branch, the pupil is equipped for understanding the language and interpreting the ideas of all printed information regarding geography." [15]

Education based on such objectives is open to criti-

[15] Harris—*What Shall the Public Schools Teach?* in *The Forum*, Vol. iv, 1887–88, pp. 575, 577.

cism, first, because they consist of the stuff that dreams are made of, for the human mind would have to be entirely remade, would have to become a sort of superhuman mind, in order to jump from the few particular scraps of mathematics taught in schools to a conception of "the abstract relation of all existence to mere time and space." Second, the aims of this education have been too individualistic. Self-culture has been worshipped. It is about time that the emphasis swings over to group culture. Dean Russell most aptly pointed out in a recent lecture that up to to-day American education has considered only the individual development, not the problem of making the individual a member of a group, fitted to fulfill all the demands for living together that this group requires. He gave as a reason for a decided shifting of emphasis from education for individual ends to education for citizenship the fact that up to very recently there has been room in America for people to live and develop more or less unto themselves, but with the increase of population to the point of congestion in many places and the resultant difficulty in meeting the demands of life, the rights of the individual must yield to those of the group.

This means that what we teach in schools must be taught in its social setting. Moreover, common-sense psychology decides that, as far as possible, things shall be taught in the way they are to be used. Arithmetic and geography, as well as reading, writing, and history, are to be used, mainly and broadly speaking, for life's needs and life's satisfactions. Then let us introduce them into our curriculum at the time when the group life of the school calls for them, and in the form needed to satisfy the "felt need" of that time. Only in this way can the school be made to yield those most intangible yet most valuable products of education—social attitudes, appreciations, service.

"Thesis 3. These ends can best be attained by the child's playing out the experiences of the family, the community, and the world."

Granting that Theses 1 and 2 have been established, Thesis 3 needs but slight explanation or defense, being nothing more than a statement that 1 plus 2 equals 3.

The history of education in the past proves that children can be *made* to learn with more or less success—the law of exercise putting the lid on the heterogeneous mass of subject matter poured into their minds. But such a mass cannot be assimilated in a wholesome way unless the laws of readiness and effect be used before the lid is put on. Indeed, unless these laws are allowed to act, digestion is replaced by either refrigeration or fermentation. Now, modern psychology has proved that

"Man's learning is fundamentally the action of the laws of readiness, exercise, and effect. He is first of all an associative mechanism working to avoid what disturbs the life-processes of certain neurones." [16]

The child's play neurones, or more specifically, those neurones which have to do with "manipulation, facial expression, vocalization, multiform mental activity, and multiform physical activity," which easily develop play, are asserted by Thorndike to be ever ready to act. Since these basic instincts work out in serious occupations as well as in play activities; since in children's play they take the form of family, community, and even world experiences, as the illustrations previously given indicate; and since a dominant note of group relationships, or citizenship, or even world-ship, is now beginning to sound in school, as well as in extra-school, life—the question, "How can the curriculum provide for these conditions?" seems to be answered in Thesis 3.

[16] Thorndike—*Educational Psychology*, Vol. ii, p. 23.

The corollaries of this thesis cover the division of this group life into grades, which has already been discussed in a general way under the first corollary of Thesis 2 and more specifically for Grades I, II, and III, in Section I. Just a few words here, however, concerning the reasons for this division of the curriculum into grades.

The idea of duplicating family life in the early school years of the child is not new, by any means. It took very definite form in Pestalozzi's mind; indeed, this is considered by Dewey to be his great positive contribution to education. After quoting Pestalozzi's

"Nature educates men for social relations and by means of social relations. Things are important in the education of man in proportion to the intimacies of social relations."

Dewey goes on to say:

"For this reason family life is the center of education and in a way furnishes the model for every educational institution. In family life, physical objects, tables, chairs, the trees in the orchard, the stones of the fence, have a social meaning. They are the things which people use together, and which influence their common actions." [17]

Pestalozzi put this idea into practice in his Poor School at Neuhof and again in his work at Stanz. But later his teaching sank from the level of active pursuits involving the use of these objects to mere contact with the objects themselves, *i.e.*, formal object lessons.

In many schools of to-day dolls have been dressed, and the children have been engaged in family activities, such as sweeping, dusting, some cooking, dishwashing, and tea parties; but this was family life "fractionized" and disjointed, so that the main emphasis was not on the

[17] Dewey, J. and E.—*Schools of Tomorrow*, p. 62.

group idea. Moreover, the group involved was the unnaturally large "family" group of forty or more, or else the too simple group of mother and baby. In the writer's experiment, in order to imitate a more typical family and at the same time to secure coöperation among different family groups (as in a neighborhood) in addition to coöperation in the narrower circle of one home, the children were organized into families of five or six members. Group competition became a large and valuable factor in the school life. The activities of the groups duplicated, as nearly as possible, the life of the family, for, as Dewey has said, the school cannot prepare for social life excepting as it reproduces within itself typical conditions of social life. (See page 151.)

Out of the interest of the second-grade child in making and selling mud pies; out of his interest in selling papers; out of his developing interest in handling money; out of the first-grade families' demand for supplies of all sorts; out of the need of the third-grade city or village for a good department store, or for unit stores, or perhaps a "general" store; out of the child's instinctive interest in making and handling a *variety* of things; out of the psychological demand that abundant stimuli be provided for the formation of useful bonds; out of the sociological demand that children be initiated very early into the industrial world that they may become better producers and consumers; out of all these grows the appropriateness of the duplication of store activities by children of second-grade age. It would seem, then, that playing store may form the basis of a curriculum rich in values for any second grade.

True it is that children have frequently "played store" in the ordinary school, but the experience has usually been merely an oasis in the desert of "regular work"—a device employed occasionally, generally in the

teaching of arithmetic. This situation naturally could not be entered into in the whole-hearted way that resulted when a store grew out of the needs felt by the first-grade families, and when the second grade supplied this demand not by fractionized store experiences but by the gradual building up of a total store situation. The second grade really becomes a play store, whose business constantly enlarges, underlying and suggesting, day by day, the need, as well as the particular form, of the so-called "regular" work, and functioning also as an element of the third grade's play city.

As to the third grade, it is also true that "home geography" has held a legitimate place in the curriculum for many years; but for the most part it has been book geography, or a geography of facts *told* to children rather than developed out of their actual, concrete participation and experience. In the comparatively few schools where such concrete participation occurred, it was usually merely a part—and a very small part—of the school life, rather than the whole, or at least the foundation or skeleton of the whole.

In this new scheme of organizing the curriculum, because of the interests of children of third-grade age, some of which were mentioned under Thesis 2 and because of the many-sided dependence of the store-keepers of second grade, as well as the families of first grade, on a city or village, the playing out of this experience may take the very concrete form of building on the floor a play city of real earth; real, children-made bricks; real streets. The life of the grade becomes life in this city, and this life determines the time and the form of presenting the subject matter—subject matter of vital significance, limited yet comprehensive, educative yet satisfying, making the "minimal essentials" as tempting to children as candy, yet giving them far more than they ever get out

of the teaching of the minimal essentials for their own sake.

One of the chief values in such an organization as that here outlined for the first three grades is found in the frequent and necessary instances of inter-grade dependence and coöperation. What better opportunity could the schools have for laying the foundations of true democracy and developing the leadership vital to the success of democracy?

The reasons why "the play way" in the next three grades should take the form of still more inclusive units of social activities and life experiences must now be apparent, but the scope of this experiment does not call for further justification here of the playing out of "a trip around the world" in the fourth grade, of "seeing America in moving pictures" in the fifth, and of "a world's fair" in the sixth, as a detailed summary of the whole. May some one soon be found to try them out in actual schoolrooms!

Throughout the whole development of the work as just outlined and in the detailed description of activities given in Section I, it will be noticed that the *doing* side constantly leads, and provides the motive for the more abstract phases of the school life. In this doing, work-levels frequently become apparent. One has only to remember his own childish experiences or some of his observations of children at play, to realize that purposive play often involves much hard work. This work may be physical and will probably prove sufficiently varied to exercise all the muscles as thoroughly as could the most elaborate and expensive gymnasium apparatus, with the advantage over this apparatus of such interest as the gymnasium instructor finds it hard to arouse. True, if the full physical advantage is to be secured, the teacher must have this end in mind, and must see that bad habits

of posture and movement are not acquired and that the activities do not run too long to the development of any one set of muscles. But much of the work that grows out of this doing is genuine mental work.

"Thesis 4. Such playing out of life institutions in school will organize the subject matter of language, arithmetic, geography, history, physical education, industrial and fine arts (including music), in such a way as to establish maximal as well as minimal essentials of the curriculum."

The effort to determine minimal essentials has been a long, hard striving for an indefinite, intangible something, which may be described as the least of each subject which teachers must teach in order to turn out products that will "do." The question, then, for the teacher has resolved itself into this: "How little may I teach in each of the branches making up a curriculum in order that the children who are taught may become fairly able to cope with such ordinary problems of life as tradition has long held that the schools should prepare for?" Might it not be more to the point to hold before the teacher the ideal of reaching toward maximal essentials? If *these* could be established, they would in a way presuppose the minimal essentials.

To be more explicit, we have been emphasizing minimal essentials and organizing work around them, expecting through a curriculum so organized to "socialize the child," to "teach citizenship," etc. The multiplication tables in each subject, *e.g.*, map study, in geography; the Constitution of the United States, in history; the rule for the use of quotation marks, in English; the four fundamental operations, in arithmetic—have been made the hooks upon which to hang the other things which the teacher has happened to teach. These last have been

considered the incidentals, the so-called "beta objectives," the fringes of the garment of learning, so to speak. These fringes or trimmings have included such things as "hand work" or industrial art, nature study, literature, sometimes even history, while the "alpha objectives," or the minimal essentials, usually occupy the most prominent places in curricula. The importance of subject matter and method are defined in terms of these alpha objectives; results are measured in terms of these. It is a very logical procedure, of course, to test and measure the tangible outcomes of activities, especially since measuring sticks for many of the more intangible values have not as yet been provided, though some of these are in the making. Till these are satisfactorily worked out it will be difficult to swing the emphasis in curriculum making from the formal minimal essentials to the less easily measured, more inclusive, maximal essentials.

Shall we use the tests in addition, multiplication, decimal fractions, rapid mental calculations? Yes, so far as their form fits the life the children are leading. Shall we spell the hundred "demons," the thousand most frequently used words of the Ayres test, the hundred selected words of the Buckingham test? Yes, so far as they are of general applicability. But as soon as the curriculum centers around living issues—the issues of the five F's—the vocabulary as well as the occupations of the school changes to a considerable degree, and tests must be molded around the natural interests and needs of group life rather than the artificial, disconnected, imposed interests of the isolated child. The minimal essentials will then be included within the maximal essentials—the knowledges and skills necessary for procuring the five F's, along with the developing appreciations, attitudes or "sets," habits, and ideals, of democracy, upon which these knowledges and skills are built.

The question, then, becomes not "What are the minimal essentials, or better, the maximal essentials?" but "Are these considered in terms of definite life responses to definite life situations?" The curriculum organization outlined in the present theses seems to provide such a concrete tying up, for each grade-unit *is* a definite common life experience. Moreover, since this organization or curriculum duplicates life experiences, the details of language, arithmetic, history, geography, physical education, industrial and fine arts, and music, as representing these phases of living together, will be determined and arranged in a natural, *i.e.*, a psychological way. Certain lines of development, certain knowledges and skills, will be taught not because they are minimal essentials, or because the tests call for them, or because they are traditional, but because they are *sine qua nons* in the aspect of life which is being played out in each grade and, by the same token, will be needed in adult life. Thus the unifying project for each grade will itself fix the maximal essentials through its own needs. Section IV gives a list of these as they developed in the trying out of this scheme.

"Thesis 5. A curriculum thus formed will insure unforced motivation, thus relieving the pressure of method."

The quotation from Dewey which forms the chief corner-stone, nay, lays the complete foundation, for my first thesis (page 138) culminates in the idea that effective learning reaches its normal estate only when knowledge-getting is an outgrowth of activities having their own end instead of being merely a school task.

Put a book into a child's hand and tell him to read; it is a task. Put a pencil between his fingers, saying, "Write"; it is a task. Give him a geography textbook and ask him to learn all he can find about lumbering in the United States; it is a task. Assign the next chapter

in the history textbook; it is a task, no matter how short or how interesting the chapter. Tell him to take the next "case" in percentage; it is a task. Give him the command: "Rise; face forward, hands extended; 'Up, two, three; down, two, three;'" it is a task. Tell him to write a composition about cotton; it is a task.

Why are all these requests, commands, permissions, alike, tasks in the eyes of the child? Why does the subject of such treatment so often hate school and begin to seek an excuse to "quit" as soon as the law will allow him to do so? Because such learning, if it be learning, lacks for him the element of satisfaction—the only oil which will keep the machinery of life running smoothly. Is satisfaction likely to result from the doing of imposed tasks, large or small, heaped upon the child in indiscriminate masses? He knows not whence they come or whither they go. If normal thinking persists in him at all, he may wonder why he is studying these things; but far be it from him to venture the question! Should he ask, it might be a "task" indeed for the teacher to find an answer for him. She really can't well tell him that her only reason for asking him to study a thing is that the curriculum calls for that topic at this time.

The good teacher often finds herself at her wits' end in attempting to follow these chopped-up curriculums. If she has any faith in motivation, her skill and ingenuity are often taxed to the utmost to find ways of introducing their dissected fragments of life—to find methods or devices which will make the dose more palatable. We do find some teachers who seem to have a sixth sense for administering the traditional curriculum. They often succeed in providing actual motive for the doing, actual satisfaction in the doing, of this or that task. But in the hands of these skillful teachers the problems assume forms very different from those quoted on the preceding page. As-

signments then become felt problems, or projects. The drives for solving these are immediate and strong. The technic of method may be psychological and hence highly educative. But we must still ask whether the process as a whole is economical, whether the drives or motive forces are intrinsically valuable or of only extrinsic and temporary worth, being grafted upon, rather than bred out of, the unit of experience to which the child is being exposed.

Adults, as a rule, do not have to seek extraneous motives for the activities in which they engage. The motivation of each act is usually natural and unforced. Owing to the complexity of the life into which the adult must fit himself, the drives are social as well as individual. Now, children—boys and girls—have their being in the midst of this motivated adult life. They constantly make both individual and social adjustments outside of school, adjustments just as truly motivated as those of the adult. Then why should the school situation be totally different? Why not make it so duplicate life in general that its natural, easy development of whole experiences may run parallel with the large social wholes with which children come into contact, more or less close, out of school? The motive in each of the grade-units sketched in the first corollary of Thesis 2 will be the felt necessity for doing this thing now, in this way, and for learning how to take the next step, and the next, and the next, in order to complete the whole. The method will be largely experimental, but when pure trial and success proves too uneconomical, the children will profit by the knowledge or previous experience of others as given by the teacher, by books, or by any agency outside the school. The social inheritance must not be rejected, but it is still true that he that saveth his life often loseth it, while he that loseth his life in a good cause finds it. So it must not

be forgotten that children should not always be prevented from making any mistakes. Dewey says:

"Opportunity for making mistakes is an incidental requirement. Not because mistakes are ever desirable, but because overzeal to select material and appliances which forbid a chance for mistakes to occur, restricts initiative, reduces judgment to a minimum, and compels the use of methods which are so remote from the complex situations of life that the power gained is of little availability. It is quite true that children tend to exaggerate their powers of execution and to select projects that are beyond them. But limitation of capacity is one of the things which has to be learned; like other things it is learned through the experience of consequences. The danger that children undertaking too complex products will simply muddle and mess, and produce not merely crude results (which is a minor matter) but acquire crude standards (which is an important matter) is great. But it is the fault of the teacher if the pupil does not perceive in due season the inadequacy of his performances, and thereby receive a stimulus to attempt exercises which will perfect his powers. Meantime it is more important to keep alive a creative and constructive attitude than to secure an external perfection by engaging the pupil's action in too minute and too closely regulated pieces of work. Accuracy and finish of detail can be insisted upon in such portions of a complex work as are within the pupil's capacity." [18]

"(a) Such an organization will bring about natural correlations and prevent disjointed work."

For some years educators have pretty generally agreed that the work of our schools has been too much cut up into packages of subject matter, detached not only from the child's interest and from life situations, but from

[18] Dewey—*Democracy and Education*, p. 231.

other bodies of related material. Efforts to correct these evils were evidenced, first, by the wave of interest in correlation of studies, and later, by the introduction of "purposive activities" or projects. The first proved helpful whenever the correlations were not forced. Work became better organized; subjects were more closely knit together. Consequently some of the loose ends were caught up and the pigeon-holes for subject matter became fewer and larger. The use of the project as a method has effected still further improvement. Besides maintaining the practice of tying together things which belong together, it added the element of purpose for the tying, thus supplying aims toward which experiences could be made to converge, as well as giving direction to the activities used as means in attaining these ends.

But is the full benefit of purposive activities secured by having two or three or even a constant succession of independent projects breaking into the routine of the old-fashioned curriculum, whose goal of covering so much subject matter per term in each study remains unchanged? And do we not incur thereby the dangers of putting a piece of new cloth unto an old garment, of putting new wine into old bottles?

Let us put our new wine into new bottles. Let us make the year's work one great project, one phase or unit of life, out of which will grow naturally a succession of related projects, or several such lines, parallel or diverging, involving group activities for group ends, but activities in which each child will certainly find some portion all his own, some problem which he himself desires to work out. Such a curriculum can be flexible enough to make use of the immediate suggestions of the natural leaders and will be vivifying enough to elicit suggestions from all, long before the year is over, suggestions of

minor ends, of ways, and of means. It is just as important for the education of children that they should themselves organize their thinking and their materials in the solving of their actual problems and projects as it is for adults to think and plan for themselves if they would live and grow in their work.

It is very easy to see that experiences in adult life are not disjointed. We can clearly trace the converging of various lines of activities toward the accomplishment of certain big desires. The mother, in order to take adequate care of her husband and children, makes a study of foods and cooking; she learns how to select fabrics for the family's clothing; she helps her husband in all possible ways to save money for a home; she surrounds the children with books, daily papers, and other means of culture; she makes a careful study along geographic and hygienic, as well as sociological and economic lines, to determine the best place to spend the family's summer vacation; she renews her acquaintance with history in order to teach her children, or perhaps in an effort to trace, for their sake, her right to membership in the D. A. R. Through the meetings of the local chapter of this society and the Women's Club, through her church affiliations and her interest in her children's playmates and their club, through her censoring of moving pictures in order to determine their fitness for the eyes of her own children and of her Scout group, she takes her place in the community as a social worker. Thus her life organizes itself naturally around the aim of being the best wife and mother she can. The father's life would show a similarly unforced directing of its activities.

Now let us look at the children's lives out of school. In order to make it possible for the family to spend the spring vacation in the country, they clean their own rooms and help mother in other ways to set the house

in order; they get their lessons studied promptly; they help to get their clothes ready for the trip; they give Rover a bath; they buy gifts for the friends whom they are to visit and make purchases to supply their own needs; they select the book or books which they want to take with them, going to the library, perhaps, for this purpose; they earn and save all the money they can, perhaps to pay for their own tickets, perhaps to spend for their friends' as well as their own pleasure during the visit; they make last calls on their friends at home. So the project, "a trip to the country," ties up in an unforced way all these varied experiences.

The curriculum outlined in Section I shows the possibility in school life of correlations just as natural as these. The organization is unified by the provision of a controlling purpose for the grade, which constantly suggests the next link in each chain of activities, and at the same time binds all the individual or small-group chains together into the solidarity of the large social whole.

"(b) Such an organization will allow for individual freedom, initiative, and originality. It will help the child to discover his own aptitudes and abilities, and will afford the teacher effective means of training these aptitudes and abilities."

That provision for individual freedom, initiative, and originality is among the most important requisites of a curriculum for children has become axiomatic. Wherever the project method is used with understanding, the child has more or less opportunity for exercising these instincts and powers. In most cases, however, the opportunities are very uncertainly distributed. In other words, the child may or may not stumble upon the problem or activity fitted to give him the development which he most needs or which the world most needs from him. Native abilities may be atrophying merely because they have not

been discovered and exercised. For, in the artificial conditions of modern civilization, it may often happen that the opportunity to try himself out *along all lines* cannot possibly come to the child through such problems or projects as the natural conditions of the child's life suggest or make possible. Dewey has said:

"The child is expected 'to develop' this or that fact or truth out of his own mind. He is told to think things out or work things out for himself, without being supplied any of *the environing conditions* which are requisite to start and guide thought." [19]

The author is strongly of the opinion that schools are largely responsible for the dearth of poets and artists as well as for the widespread lack of power to enjoy poetry and art, because the curriculums have killed off both constructive and appreciative abilities along these lines.

Two important outcomes are sure to result from the living through of such experiences as are outlined in Section I. First, in the working out of each large unit of life, such a variety of experience is necessitated by the making and executing of the plans for the minor, contributing projects that each child may easily discover his special niche in the social structure, his special creative power. Individual choice of group work is offered when each new unit is begun, and a trying-out process within each group follows. For instance, in the project, "making wall paper for the bathrooms of the newly constructed homes of the doll families of Grade I," all the members of each family compete for the privilege of making enough paper to cover the walls of this room. First, there is a meeting of all the families, at which samples of paper suitable for this purpose—obtained from a paper-hanger or made beforehand by the teacher—are shown and dis-

[19] Dewey—*The Child and the Curriculum*, p. 24.

cussed, so as to establish standards. A strongly motivated art lesson follows, each child making his design and choosing his tints. Each family is constituted a committee to choose from the samples made by its members, with the teacher as consulting expert. The special artistic abilities disclosed in these lessons will thereafter be nurtured by exercise and reward. In the varied projects which this group of miniature families undertake during the year, manifold opportunities are found for similar discovery and exercise along the line of all the essentials for social well-being.

In the second place, the use of a unifying project greatly reduces the labor and strain of project teaching. Indeed, it might be physically impossible for one teacher to guide and help all the children of a large school engaged in absolutely self-suggested projects. But one teacher can easily handle as group work the initial development of each new phase of the unifying project, since every child will have a strong interest in learning how to do the thing which is so significant to him and to his associates. The teacher will then be able to check up personally the individual work of the children, giving help where needed and enlisting the services of the leaders as fast as these are discovered or developed. Thus there may be abundant opportunity for freedom, initiative, and originality, while the limits imposed by the nature and sequence of the problems before the class bring guidance within the ability of one person.

"(c) Since the work of each grade will require the repetition and enlarging of the subject matter of the preceding grade, drill in content is provided without special mechanism, while the necessary drill in processes may be made either an integral or a related part of the project."

Under the theses thus far considered, an attempt has been made to prove (1) that a curriculum may be con-

structed which fully recognizes the element of play (satisfyingness); (2) that life as it is lived out of schools may be carried into the school; (3) that large units of this life may organize the school activities; (4) that there will be a natural sequence in the development of the phases of this unit; (5) that the "doing" side of the work will guide the thinking and planning side; (6) that the facts learned and the skills, habits, attitudes, and ideals developed will bear directly on the affairs of to-day rather than be directed toward to-morrow; (7) that the so-called studies—reading, writing, arithmetic, history, geography, and the others—will be taught as necessary phases of experience; (8) that through the large life-wholes of the curriculum the "minimal essentials" may be painlessly attained.

One of the questions of paramount importance is, "Does the curriculum provide for the necessary repetition and drill, the stamping-in process, the formation of good habits—and can it make this drill interesting in itself?"

To begin with, in such a curriculum as has just been outlined things which belong together occur together, and occur again and again. This is the initial step in habit-formation.

The drill work is handled in much the same way as in the traditional or the newer topical type of curriculum, except that there is no need to drag in disconnected and often far-fetched associations, such as climbing ladders, stepping over the river on stones, or picking apples from trees, to impress the fundamentals of number or word study. When "devices" are needed—and they will probably have to be employed in order to make the more difficult processes a part of the child's nervous system—they are chosen in such a way as to connect with the interest at hand, so that the presence of similar elements may help

the learning, and the child's attention may be kept on the thing to be taught rather than diverted to the strange, interest-getting device.

In all cases the child should be allowed to discover for himself the need for drill, should be made actually to want it, before the drill is given. For example, the child frequently felt the need for spelling the names of the streets represented in the city project. He met it first when the school city was organized; again, when the laying out of the city was begun and the names of the streets needed were written on the board as the children suggested them. He experienced the need when he wrote the signposts for his streets; once more when he wrote his history of the city. The motive here was so strong, the interest in learning these names so great, that little drill proved necessary. But if need had become apparent, drill might have taken the form of such a game as the following. The streets are diagrammed on the blackboard. The first child who can put in all the names correctly will be allowed some privilege, such as that of having his name signed to the street guide post in his own aisle.

Again, suppose the first grade needs a drill in number. About the time that the children are ready to buy hats or dresses for the doll families in the second-grade store, they must learn to read price marks. Instead of giving the necessary drill by having numbers on "birds flying in the air," we "play store," outlining a huge show window on the board, and allowing the children to draw within it garments and hats with price marks upon them. Rapid recognition may then be practiced in various ways. Or, price tags may be pinned on the children's own garments, and a game may be played which will give physical exercise as well as the number skills desired. In all cases, however, the teacher must make sure that the emphasis is on the chief object of the drill.

As to the content drill or repetition, this type of work furnishes it naturally. An understanding and appreciation of the facts taught in one grade before passing on to the next is even more essential in this new type of work than in the traditional curriculum. But this understanding is practically certain to come. For instance, the child in first grade, in the making, dressing, and housing of his doll family, will learn some very simple facts about cotton, wool, silk, wood. When he gets into second grade he meets the same materials in building the store and stocking the dry goods and the furniture department; thus he reviews the facts learned the year before and adds to them in this widening of his experience. In the third-grade city he again meets these materials as he sets up in business for himself; and going into business calls for more knowledge concerning one's wares than the mere stocking of a store department.

In the field of history, the child plays Indian tribe in the second grade, the activities of the tribe furnishing the stock of the Indian department of the store. Again in third grade the Indian appears, taking his place among the other primitive peoples met by the child as he traces the evolution of the five F's—food, fabrics, firesides, friends, and fun—in developing the modern city. Thus is drill—Thorndike's "practice with zeal"—provided for.

"Thesis 6. School rewards and punishments will parallel those of real life, since individual success in this play life involves group as well as individual satisfaction; while failure brings group disapproval which spurs the individual to renewed effort or induces him to choose another line of activity."

One of the largest factors in child life is that of discipline—the problem of moral development. Those interested in the training of children are now pretty generally of the opinion—first, that moral and social develop-

ment are essentially one and the same; and second, that this development cannot be attained by talking about it, or by the teaching of fixed rules of conduct. Here as elsewhere:

"Educational theorists neglect them (the laws of habit) when they explain learning in terms of general faculties, such as attention, interest, memory, or judgment, instead of multitudes of connections; or appeal to vague forces such as learning, development, adaptation, or adjustment, instead of the defined action of the laws of exercise and effect; or assume that the mere presence of ideas of good acts will produce those acts." [20]

Social, *i.e.*, moral, behavior is the outcome of the whole life of the child. Methods of working, habits of thinking, the building up of ideals of work and play, the development of modes of behavior and thinking along all lines of social experience, determine the degree of morality or socialization, or of unmorality or non-socialization, of the individual.

In the group life called for by the suggested curriculum, group approval, group appreciation, group suggestion, group punishment, are the disciplinary agents. When, for instance, the father of one of the first-grade families proved unworthy of his responsibility, the group so disapproved that he was forced either to mend his ways or to give up his high office of leadership. This being a play situation, it is quite possible to try out the other male members of the group for the position. Let the best father win! In the working out of the writer's experiment, this shifting was seldom necessary, for the father usually reformed promptly and effectually in the light of his fellows' doubt of his fitness to head their group. In the store, the cashier or clerk who neglected

[20] Thorndike—*Educational Psychology*, Vol. ii, p. 20.

his business was demoted, or deprived of his wages, or in some other way was made so to feel the disapproval of the group that he turned over a new leaf. In the city, the child on Brave Street who gave trouble was removed to Trouble Street by the decision of the other Brave Streeters that he was an undesirable neighbor. He was allowed to return when he brought forth fruits meet for repentance; and none of the dwellers on Trouble Street were content to remain there long!

As to the habits and standards of work which such a program develops, the groups decide what degree of finish or skill can be accepted, and what must be turned down as unfit. Thus high standards for the final output can be constantly maintained. Such methods of punishment as being kept after school, writing "disobedient" one hundred times, or taking reports of misconduct home to parents are reduced to a minimum. The teacher in each case becomes the court of final appeal. Her advice is often sought, but except in extreme cases it is not imposed upon the group. It is not even offered unless in her judgment the word in season may guide into more just, more wholesome, or more economical paths.

The author feels very strongly the truth of what Dewey has so well put in saying:

"The child is one, and he must either live his social life as an integral, unified being, or suffer loss and create friction. To pick out one of the many social relations which the child bears, and to define the work of the school by that alone, is like instituting a vast and complicated system of physical exercise which would have for its object simply the development of the lungs and the power of breathing, independent of other organs and functions. The child is an organic whole, intellectually, socially, and morally, as well as physically." [21]

[21] Dewey—*Moral Principles of Education*, p. 8.

"Thesis 7. While a special plant is desirable for this sort of school, the new organization can be begun in a building of the ordinary type and at moderate expense, since the children can furnish much of the initial equipment and can make more and more of it as the organization develops."

In anticipation of the objection that a new and costly type of equipment will be essential to the carrying out of the sort of curriculum here suggested, the author would say that though a change in some general features of the ordinary modern school building would simplify and improve the working out of the projects, a wholesale change is not necessary. In the experiment at Trenton very little special equipment was supplied and that little was inexpensive. The essentials, besides the determination on the part of the teacher to make the most of what she has at hand, are the coöperation of the school administrators, (1) in the necessary adjustments of daily program, such as the breaking down of short periods of work—for in most cases the project will suffer unless the time for stopping an activity can be influenced by other elements in the situation than the expiration of a twenty- or thirty-minute period; (2) in the moving of furniture so as to leave space enough at one end of the room for the meeting of groups and the actual manual labor involved in the scheme; (3) in the provision of a small room where materials may be kept and where groups may retire for certain kinds of work; (4) in the furnishing of a small fund for the purchase of such materials as the children, with the help of the teacher, cannot find ways to get. Most of the things needed can be and ought to be supplied by the children; this finding of ways and means should be a part of the project, unless it involves an outlay so large that parents would suffer.

The author is taking it for granted that if the school-

room is not large enough to provide the space for such work by a shifting of the furniture, an additional room may be given over to the grade; one such room might answer for several grades. She is assuming that each room will have a few good work-benches, fitted with tools which the children will be *permitted to use,* and that the furniture will be of the movable type. She also hopes that the teacher will be supplied with the books necessary for the carrying out of her work; furthermore, that text-book writers will soon be furnishing the types of material needed by the children, in the shape of reference books as well as readers. The need here is serious.

"Thesis 8. A curriculum built on projects duplicating life experiences, and widening as the experience of the child widens, creates or fosters in teachers a live interest in their profession and promotes their personal as well as professional growth, as the more formal curriculum seldom does."

Results of recent studies of the teaching personnel show that the profession is not attracting the best students among the high school graduates, nor are the schools succeeding in retaining the teachers who have proved themselves most fit. There are various reasons, chiefly economic, for this twofold failure, which cannot be discussed here. But aside from these, there is a possible cause which seems very plausible to some of us who have come into contact with many teachers, both in training and in the field. This is the fact that for the individual with marked initiative and originality, the routine work of teaching along the traditional lines which she is usually forced to follow is deadening, and often makes the life such a bore that she is glad to leave it even without the lure of higher salary. The especially gifted high-school pupil, having grown up under the old system, judges the profession from her own experience under it and is unwill-

ing to enter a field which affords so little opportunity for active thinking and independent doing. This type of person seeks employment offering greater incentive and opportunity for creative activities than is afforded by the pouring, or perhaps pounding, of cut-and-dried subject matter from books, into the heads of children. The mediocre type of graduate, lacking the inventive spark, is satisfied to receive material and directions for her work in such predigested packages labeled "English," "Arithmetic," "Literature," "History," "Biology," as are handed out in many Normal Schools. She hasn't even waked to the fact that what was given to her under the name of education is open to criticism. She has taken it as a matter of course that the schools did not discover to her any especial abilities in herself—only the average intelligence which makes it possible for her to hand out to children just such packages of predigested mental food as were given to her.

"(*a*) *Such a curriculum is of special value in Training Schools in order that the teacher in training may learn to handle life-wholes.*"

If we would have our young teachers help us develop improved methods of teaching children, the impetus must be given in the Training Schools. It hardly seems reasonable to expect these beginners to initiate improvements in the field, if they find no fountain of inspiration, no demonstration of ways to utilize the waters of such a fountain, in our teacher-training centers. These should constitute the field for experimental work—for proving the practicability of new ideas—as well as that for giving practice in the best types of teaching already accepted. These are the places where young teachers must get the experimental attitude. This attitude is unlike many others in that it cannot be taught from books. Participation in some experimental work, *carefully*

supervised and checked up, of course, must be provided.

The writer made the experiment described in Section I, in a Training School where most of the detailed work was done by student teachers. One of the most interesting results was the changed attitude of these young women toward the whole profession. The curriculum which they helped to put into effect in the first three grades opened up to them new experiences which speedily called forth all their resources, and developed a spirit of adventure, a spirit of real joy in their work. There was no monotony in their ten weeks of teaching, and long before the expiration of their period of practice many had discovered abilities which they had not dreamed that they possessed. Knowing the ordinary school as they knew it, their usual fear was that the force of conditions, the lack of insight and sympathy in those over them, would make a continuance of their joyous work impossible in their regular positions.

The new curriculum became a means of "try-out" or "try-again" for a number of seniors who had not made a success of their practice teaching under the old régime; and not one of them failed. This was due mainly to the fact that arrangement and sequence of subject matter, details of content, motivation, correlation, discipline, the rousing and sustaining of interest—those factors which make the charge of a schoolroom so complicated a task for the inexperienced teacher—are largely taken care of under the new organization by the very nature of the life-whole which dominates the work of each grade.

"(*b*) *Such a curriculum is a valuable means of professionalizing subject matter by furnishing a hub, as it were, from which the so-called academic subjects of the Normal School curriculum may radiate.*"

The writer believes that the elementary curriculum should be the suggesting agent in the training of the young

teacher. Moreover, each of the facts involved in this curriculum should be made a nucleus for related knowledge, since culture as well as successful teaching in any field requires more than mere acquaintance with the facts to be taught. The teacher-to-be goes to the Normal School with the two-fold purpose of learning how to use the tools of instruction and practicing their use under competent constructive criticism. She should get this experience all through her course, not merely in the "professional" courses.

Now, what is really meant by the phrase which we now hear on every side—"the professionalizing of subject matter"? Does not the term—*should* not the term—include all of the following implications?

1. Adaptation of subject matter in the so-called academic courses to its use in the elementary school, plus all the enrichment possible. This means that the elementary curriculum will form the starting point, the "alpha," the "minimal essentials," of the Normal School curriculum, but the "omega" will be limited only by such extraneous factors as the amount of time and space available, the knowledge and skill of the "academic" teacher, and the possibility of getting the materials needed.

2. The selection of subject matter from the vast fields of knowledge according to the demands of the elementary school rather than in response to tradition or the leanings of the individual instructor in the subject.

3. An attempt to build up and develop the elementary school through the Normal School. This makes the indirect aim of the Normal School to train little children to live more truly, more effectively. Therefore its own students must be trained so to live.

4. Living material, in the form of "life-wholes," as the basic projects of the Normal School, as of the elementary school, curriculum.

Notice the gradual widening of experience involved in the six life-units of the curriculum already described. Little which is of importance to the individual or to society is left out. Most of the subjects representing life activities, life processes, and life ideals are implied in these six inclusive projects. Consequently the argument that the elementary school curriculum is too narrow, too limited in possibilities for the all-round growth of Normal students, is not well grounded; for the whole development of civilization, from individual living and the simple family unit to coöperative and democratic living and the big world relations, is presented in a concrete way in these six projects.

Moreover, in such a Normal School course, disjointed work—unorganized materials with loose ends everywhere—may be avoided. The wise selection of materials and of points of emphasis is ensured. Method is guided by the choice of material and the very nature of the successive situations. This provides for practice in all methods, or at least in all the methods used in everyday life; and applicability to everyday life is, after all, the only excuse for the existence of any method.

The following plan for launching the work is suggested. The elementary curriculum, worked out in more or less detail, will be put into the hands of every student soon after she enters the Normal School, to be used as a text. She will analyze the curriculum as it stands and will arrange the subject matter comprised in the different phases of life treated, under the usual heads of geography, history, arithmetic, etc. The lists of topics, questions, and projects thus obtained will be handed to the teachers of the respective subjects. In each department the lists will be pooled, the students helping in the operation. Each subject-matter teacher will then organize her course, the students again assisting. Next there will be a meeting,

or a series of meetings, of all subject-matter teachers, to consult one another about the courses as organized by the individual teachers with their classes. If necessary, there may be a partial reorganization, or a rearrangement of the order of topics, in an effort to have each project worked out as a whole, the different departments handling the phases of subject matter falling within their province. The students will be called in to this meeting to help in the final reorganization, for such planning as this is in itself valuable teacher-training.

When all the phases of any subject needed by the elementary curriculum in the six grades have been thus organized and the "leads" which they open have been utilized, if there should remain any part of the subject which the academic teacher thinks should be given to complete or round it out, this part may be introduced wherever it best fits into the scheme. The head of the department will, of course, eliminate the overlapping which will be inevitable in the original lists owing to the fact that the later grades study subjects more intensively than the earlier.

It will probably be necessary to remind the students more than once during their course, that there must be no "forced feeding" of the children—no effort to give them even indirectly *all* of each subject which the inexperienced teacher has just learned.

Before beginning to use the curriculum thus prepared, an introductory knowledge of some of the fundamental psychological and pedagogical principles involved should be given in a general course, such as that outlined by Dr. Bagley, but not yet published. It might be well to let this work go on during the process of organization just described, so as to allow the subject-matter teachers more time, in the intervals between their joint meetings with the students, to consider ways and means of carrying

on the work, for there will be various problems of administration to be discussed. It will take time, too, to look into the possibilities of coöperation with local industries.

One of the main objectives in this scheme is the early introduction of practice teaching, and one of the chief emphases is on the way of beginning this most important phase of training the novice in teaching. It is the opinion of the writer that we make a great mistake in introducing students to their first classes by having them do the sundry and various chores of the schoolroom, such as the care of books, the records of attendance, etc. The children easily and quickly get the idea that the student who does nothing but this sort of work—which has been aptly called the "dish-washing" of teaching—is undergoing an apprenticeship, is not fit to teach, and they respond to her suggestions or requests in this spirit. Thus the morale of the Training School is frequently lowered. The children form the habit of disrespect for this person who "doesn't know how to teach yet," unless she happens to have both self-confidence and tact, unless she is a "born teacher." The work referred to is necessary, it is true; but the young teacher will have abundant opportunity for acquiring all these skills in the course of her training, if, indeed, she is not in danger of overlearning them.

Would it not be better to introduce the student to the children through an actual, live, teaching experience, making sure that these "first appearances" involve activities which the children themselves feel to be well worth while? They would thus form the habit of looking forward to the coming of this teaching visitor with pleasant anticipations of something interesting rather than with the idea of trying her to see how far they can go.

Such a first appearance would be possible for every student teacher if the emphasis in developing each unit of academic subject matter was equally divided between

facts and method. Each unit should involve the making of lesson plans, perhaps the working through of a few of these plans—the Normal School class acting as children—and should end with the teaching of the unit in the Training School after a most careful sifting of ways and means, as well as of the Normal School class, in order to determine which member shall do this teaching.

This plan would insure well-worked-out lessons, carefully supervised by department experts, and fitting into the general scheme and development of work in the Training School instead of upsetting it completely, as usually happens even in those Normal Schools which are making the strongest efforts to bring the academic and the training departments together. For example, in the third-grade project of "playing city," at the time the children need to know something about the departments of the municipal government in order to organize their city, the history department, having already worked out this lesson in detail, may be ready to make a contribution to the grade work by having one of the students give a lesson or a series of lessons on this subject. If the history department is not ready to do this, the work will be given by the room teacher, for it is hardly possible that even the most careful organization will enable us to reach the ideal of having each unit of the training school curriculum taken up in the academic department before the time for teaching it in the grade.

In the following outline of content for the different departments in the Normal School, no attempt is made to *refine* the organization of the subject matter under each of the conventional heads, geography, English, etc., since the scope of the problem here undertaken does not permit such refinement. The suggestions are given in the topical form, using merely words or phrases; the question form would probably facilitate and strengthen the work. No

time limits for the development of each topic have been set, nor has the matter of credit units been worked out as yet. The aim of this discussion is merely to get before those interested in Normal School work definite proposals for a new organization of curriculum content and method which may help to solve some of the numerous problems involved in securing full coöperation between academic and training departments, and the largest measure of mutual helpfulness. The writer hopes that she has shown possibilities of a richness of study for the Normal School student which will enable her to teach facts of the greatest value to the children and to develop in them habits, skills, attitudes, and ideals most worth while. It is not expected that all of the subject matter suggested under each topic will be given to the children, but all of it should be understood and learned by the student teacher. For it is the contention of the writer that the making of good teachers is not the only function of the Normal School. This institution will not attain the full measure of its growth, will not discharge the full measure of its responsibility, until it shares with the "academic" college the duty of sending out its graduates broader-minded individuals, better citizens and better members of society, than they were when they entered. It is hard to believe that learning how to teach children to live a broader, a more decidedly socialized, type of life can fail to stimulate the teacher's thinking and lead her into a richer and more socialized life of her own.

THE NORMAL SCHOOL CURRICULUM

I. CONTENT MATERIAL FOR THE FIRST-GRADE PROJECT—PLAYING FAMILIES

1. English

Making sentences
Making rhymes and jingles
Building up and reading directions for the work done

Reading rhymes and jingles
Reading advertisements
Writing and reading letters
Reading questions and giving answers
Reading dialogue
Reading stories
Reading poems
Selection of child literature suitable for first grade
  (*a*) Stories (*b*) Poems
Making stories and poems or jingles to fit occasions
Mother Goose in home life
Some lessons in typewriting
Methods of intelligent drill
Phonetic work, as a tool
Speech development
  (*a*) For individual help
  (*b*) For correction and the formation of good habits in children
Library method for getting at the material involved
Penmanship

2. ARITHMETIC

Household arithmetic
  Measuring (Mensuration in detail. Systems studied comparatively)
  Counting { Economical methods / How to present to children?
  Sorting
    As to size
    As to weight
    As to length
    As to width
  Money
    Buying } Economy, common sense
    Selling }

Adult arithmetic dealing with these points

Methods for drill in the facts taught in this grade

Comparisons—large, small, middle-sized
  Class work out as many devices as possible for teaching these
Mother Goose and arithmetic

3. Physical Training

Folk dances, Folk games, Singing and action games } Find dances and games suitable for home occasions; Originate such as cannot be found

No formal work except for corrective purposes

4. Industrial Arts

Family clothing, Family housing } problems

Buying

Pattern making

Cutting

Sewing

Cotton, Wool, Silk } study. Charts made

Manipulation of materials

- Clay of all sorts studied and handled
- Wood of all sorts studied and handled
- Fabrics of all sorts studied and handled

} Charts made

Constructive activities

- Play families { Various kinds of dolls made; History of dolls studied }
- Play houses—a variety made
  - Articles in the home
  - Good taste in furnishing
- Housekeeping. Practical problems
- Lunches. Preparation and packing

5. Fine Arts

Decoration of clothing, Applied design { Embroidery; Stenciling; Tied-and-dyed work and Batique }

Decoration of the home, A careful study of all phases { Wall papers, woodwork, textile decorations, simplicity of form, picture arrangement }

Decoration of the schoolroom

Decoration of books
Picture study—with the aim of making wise selections for use with the children, as well as from the viewpoint of appreciation
Flower arrangement

6. Elementary Science (Nature Study)

Animal families—father, mother, babies
  Each student responsible for study of one family
  If practicable, one or more families to be cared for, for a time at least, in the laboratory or in the Training School
Human biology
Household pests
  How detect
  How exterminate
Household chemistry
Vegetables used in the home
Garden work
  Vegetable gardens for home and school
  Flower gardens for home and school
Wild flowers of the season

7. Music

Family songs
  Folk songs studied and given as programs for various occasions
Other forms of music for entertainment
  Opportunity for lessons on piano, violin, etc.
Victrola records, carefully selected
Good taste in music for the home
  Elimination of the "jazz" type
Opportunity for development for the specially gifted

8. Social Life and Hygiene

Family life
  Historical and sociological study of the family as a unit in society

Study of primitive life, emphasizing especially the family and the development of communities and larger groups
Primitive homes
Group living—for protection, work, pleasure
Club life, as representative of concerted activities
Forms of wholesome entertainment
  In primitive times
  In modern society—detailed study of ways and means (music, plays, readings, lectures, moving pictures)
Trips—real and imaginary
  Kinds
  How to conduct
  What to look for
  } Class take these trips, which will be carefully planned
Mother Goose and social life

SECOND-GRADE PROJECT—PLAYING STORE (DEPARTMENT TYPE)

1. ENGLISH

Second-grade literature
Letter writing
  All types, emphasis on business forms
  More work in typewriting
Advertising
  Different methods
  Cartoons
"The Advertiser," a store magazine
Store stories, for the magazine
Drill in spelling and correct form whenever need arises
Students to keep individual spelling books in which are recorded all misspelled words

2. ARITHMETIC

Commercial arithmetic
Making of maps and graphs
Statistical skills needed in industrial studies
Clothing prices—reasons for

Furniture prices—reasons for
Profit and loss in buying
Actual experience in buying
  For manual training department
  For domestic science department
    Materials for clothing
    Supplies for lunch room and for cooking classes

3. Geography

Forest areas, particularly in the United States—maps
Other raw material areas, *e.g.*, hides and leather
Pottery areas
Commercial geography
  Transportation
  Water power
  Products
United States production, compared with the output of other countries—graphs
Fabric countries
  Cotton, wool, silk, linen, lace
Toy countries

4. History

The Industrial Revolution and its far-reaching effects
Agencies for supplementing education in industries
History of furniture making, especially in England and America
History of spinning, weaving, etc.
  Inventors in this field
Industrial civics
Industrial laws
  Political issues
Child labor laws
Forestry laws
  Suggestions for constructive measures
Fire laws

5. Elementary Science and Hygiene

Tree study—forestry
Cotton, Linen, Wool, Silk } Botanical or zoölogical nature, cultivation, etc.
Leather
Production of food
Preservation of food
  Refrigeration, canning, drying, etc.
Lighting—chemistry and physics
Heating—chemistry and physics
Ventilation
Telephone
Telegraph

6. Industrial Arts

A complete set of substantial furniture for each room of a house and large enough for the children of grades I–III to occupy. Each member of the Normal class to make at least one piece, those showing special skill to make the more difficult pieces
Types of furniture—periods studied
A study of furniture woods
  Different woods used for the different sets mentioned above.
Wood finishes
  Polishing
  Painting
Good taste in furniture
Review of fabric origins
Weaving
Testing for quality
Factory conditions
Factory laws
Economic problems
Making rugs for playhouse
Study of Oriental as well as domestic rug manufacture

Ready-made clothes
  Each student to make at least one garment, motivated by her own need or that of someone else
Millinery
  Each student to make one hat, the making to be motivated
  Feather industry
  Artificial flower industry
Lace industry
Toy industry
  Each student to *originate* and make one toy
  Study of conditions in the industry
Pottery industry
  Study of conditions
  Indian *vs.* modern manufacture
  Each student to make at least one piece
Shoe industry
  Economic conditions
  Making of charts to illustrate processes
Development of one department of the second grade's store in detail, to be taught in the grade. Different phases taught by different students

7. Fine Arts

Applied design in houses, furniture, china, clothes
Museum trips or pictures as helps in this study
Carving, Painting of ornament } applied to the sets of play furniture
Fabric decorations
  Embroidery
  Stenciling
  Batique
  Block printing
  Factory methods of printing
Rug designs, especially in Oriental rugs
Indian pottery designs
Advertisements—Posters

THIRD-GRADE PROJECT—PLAYING CITY

1. ENGLISH

Reading clubs
  Organized in the class for studying the best literary productions. Not all working in the same field, but making reports and giving excerpts at inter-club meetings so that each may get some parts of the conquests of all
Third-grade literature
Library course, gathering material related to the three phases of the work—Reading clubs
  Literature for the third grade
  City problems
Public speeches
City business forms
Directions for the various pieces of work to be done
" Plans and specifications "
Reports of activities of the various departments of city government

2. ARITHMETIC

City finance
City graphs
Taxation
Banking
Methods of investing money
  Commission

3. GEOGRAPHY

Home or local geography
Map making
  City maps
Map interpretation
  Land contours
  River forms, etc.
Products
  Exports and imports
  Transportation of commodities
Railroads
  To what points?
  From what points?

4. History

City governments
  Different forms compared and criticized
  Evolution of forms
City problems (Civics)
  Sanitation
  Protection of life and property
  Punishment of crime
  Prevention of crime
  Water supply
  Milk supply, etc.
City charities
  Organized methods
Taxes
Census
Civic opportunities through organizations, *e.g.*, Scout movement, Red Cross, lecture bureaus, Y.M.C.A., libraries, etc.; students suggest constructive programs for these agencies for the improvement of society
Primitive history (origins in)
  Evolution of—
    Houses
    Streets
    Bridges

5. Elementary Science and Hygiene

Lighting the city
Water supply
City heating systems
Problems of city hygiene and sanitation
  Pure milk supply
  Ice for the city
Trees in the city
  Kinds, uses, planting of
Means of transportation
  Trolley system
  Taxicabs
  Trucks

Telephone service
Telegraph system
Mail service—pneumatic tubes—aeroplane delivery

6. Industrial Arts

Methods of constructing a city in the schoolroom, demonstrated on sand table
  Opportunity for numerous plans and suggestions
  Study of the possibilities of the sand table as an aid in the clarification of ideas
House construction
Street construction
Bridge construction
Typical industries
  Trips
  Products
  Charts
  Reports—the outgrowth of careful study and investigation

7. Fine Arts

Methods of beautifying the city
Horticulture
  Class to undertake the beautifying of a waste place on campus or elsewhere.
Use of marble, terra cotta, cement, for ornament
Art gallery
  Class to collect photographs or prints of good pictures or statuary and mount them for use in the Training School
Primitive art
  Very early types
  Development through successive periods
Use of primitive methods and motifs in decorating the objects made during this study

8. Music

City concerts
  An orchestra organized, if class contains enough musicians
  Use of good records of band music and symphony orchestra numbers (to supplement or replace *fine* concerts)
City choruses
  Emphasis on folk songs
  Class to arrange programs, and render them on occasions
City dancing
  Folk dances
  Esthetic dances by those with ability and training
  Social dancing
    Reasons for discrimination

NOTE.—Effort to secure appreciation of all forms of art in surroundings—music, dancing, pictures, statuary, vistas, landscape gardening.

Since the unifying projects for the next three grades have not yet been tried out with children, the writer will not attempt now to make definite proposals for the Normal School paralleling the work of the fourth, fifth, and sixth grades. However, the suggestion of a few possibilities may help to establish her contention that the elementary school curriculum is a sufficient basis for a Normal School curriculum almost limitless in possibilities, yet having vital organization and motivation—progressive, inclusive, and reaching deep into the lives of the students.

FOURTH GRADE—PLAYING A YEAR'S TRIP AROUND THE WORLD

The history will be Oriental (including Egypt, Babylon, Assyria, Palestine, Phoenicia), Grecian, and Roman, to give background and perspective, with glimpses of the

history of the peoples visited (to be supplemented by, or for, the work of the sixth grade).

Geography will give a bird's-eye view of the countries visited, showing continents and national boundaries, land forms and water forms.

Number work will be largely "traveling arithmetic"—methods of payment (checks, travelers' checks, drafts, money orders); buying tickets, mileage rates; securities, insurance (accident and life); names and equivalent values of the coins or pieces of paper money in other countries, especially those best known or most frequently met.

English work will comprise letter writing of all forms, telegrams, cablegrams, keeping a diary (descriptions of places and people), perhaps to be organized later into a book, "My Travels Abroad." Correct pronunciation and clear enunciation emphasized. Conversation in foreign languages, especially the forms needed in travel. Literature appropriate for fourth grade.

Fine arts abroad suggests almost inexhaustible possibilities—museums, characteristic art of each nation, architectural beauties of cathedrals, town halls, etc.

Industrial arts might take the direction of a series of sand-table projects, showing various characteristics of each country as it is visited, national costumes, etc. Comparisons of means of communication and transportation would be very effective.

Science and nature study will include a study of temperature and climate, products of countries visited, races of men; cable systems, ships, submarines, aeroplanes, dirigibles.

Physical training will give fine opportunity for the folk dancing of different nations, festival activities, national ceremonies.

FIFTH GRADE—SEEING AMERICA THROUGH MOVING PICTURES

This project at once suggests a detailed study of American life and the processes of Americanization, the necessary foundation for wise methods of assimilating our new blood having been laid in the preceding studies. Different types of industries will be studied as characterizing different sections. Geographic controls of production will be considered, geographic influences on population, labor factors, economic problems, etc.

The films used will show details of industry, details of travel through America, fine scenery, forestry areas, large cities, slum conditions, historical spots, etc.

The Normal School students will devise various means of *playing* moving pictures when films are not available.

SIXTH GRADE—A WORLD'S FAIR

This work will be a summary of all that went before, with a deeper or more intensive study of those elements in world geography, world history, world industry, world art, world communication through speech, world interdependence, which are necessary to show America's relation to other countries and to make clear the *reasons* for her obligation to the world in the establishment of a truer and more lasting brotherhood of nations. The Normal School students would help the sixth grade in many material ways in their presentation of a world's fair.

In the development of these six projects, each member of the class will have taught at least two units under careful supervision and under conditions assuring the respect of the children, before beginning her period of full-time teaching. Having taught in each grade, she will be sent, for at least ten weeks of responsible practice teaching, into the grade in which she scored the greatest success during her apprenticeship, or the grade she most desires to teach after her graduation.

These periods of practice teaching will close long enough before the end of the term to allow a rounding up of difficulties encountered and questions aroused, in what may be called a summary course. Each student will return to her class and present her individual problems. These will be classified and organized into a general course, which will include a further study of principles of education, psychology of subject matter, child study, school management, etc. The exact nature and scope of this course may vary from year to year since it will depend largely on the nature and scope of the problems presented by the students.

SECTION III

GUIDING PRINCIPLES IN CURRICULUM MAKING

WHEN one attempts to state objectives, aims, fundamental principles, for curriculum making, he is confronted with a very complex problem. In the first place, there are many obstructions to sane thinking and sound judgments. A list of these hindrances would run somewhat thus:

1. Social impediments, which may be broken up into:
   a. Limitations in the physical environment.
   b. Limitations in the moral environment.
   c. Limitations in the cultural environment.
   d. Financial handicaps.
2. Intellectual and temperamental deficiencies, or, psychological handicaps.
   (Here comes in the lack of definite scientific knowledge concerning the optimal methods of getting over to the child certain kinds of subject matter.)
3. The benumbing force of tradition.

In the second place, there is frequently a lack of definiteness and concreteness in prescribing or describing a curriculum. This is often the result of a failure to carry the suggestions made at long range through to their actual embodiment in schoolroom practice.

In order to get before us the principles of curriculum making which have been proposed by some of our more creative educational thinkers during the last thirty years, the following statements, taken more or less at random, are quoted:

I

"Education is a process of development."

"The school is an artificial environment, created for the purpose of preparing the mind to be afterwards educated by the environments of life."

"Select (*a*) the studies and the means of training which develop the greatest amount of mental and moral power, and (*b*) those which throw the greatest amount of light on the environments of life (physical; social, intellectual, and moral; government; business and trade; industrial; esthetic)."

"The course must distinguish in its aims and its methods of teaching between studies furnishing material of thought and those which furnish merely symbols or tools of thought."

"The curriculum must include other means of expression, such as manual work. The course ought to make provision for the development of the creative and executive faculties, at every stage of the child's development."

"It (the course) must regard the coördinating of different studies, a blending of different lines of work, in order that knowledge can be truly organized in the child's mind and converted into faculty or power."

NEW ENGLAND SUPERINTENDENTS' ASSOCIATION.
REPORT OF COMMITTEE—1890.

II

"In the course of study we place on one side all the studies that belong to mathematics, physics, biology, and astronomy, and we add to these the studies of language and history. We then place on the other side the single branch of study known as literature. We speak of the numerous studies in the first group as relating to nature and mind in general, but we contrast all these with literature, and assert that the branch of study set by itself over against that group, namely, the gems of poetry and

belles-lettres, is the one that does more to give us a knowledge of human nature than all the others combined.

"Thus in old age a man is apt to say of his studies in the elementary school: 'What I learned of arithmetic, geography, grammar and history has been useful to me, but it has not proved to be so thoroughly practical as the selections from literature which I read in the school readers; for in them I learned to observe and express the feelings and emotions of the heart. I learned to trace these mere feelings into convictions and clear ideas. They became principles of policy and finally inspired and guided the acts and deeds of my life. In conning our reading lesson we learned how a blind instinct becomes an emotion, then a well-reasoned thought; later on a conviction and then an action; and, last of all, a habit. We noted all this in the lives of others and also in ourselves. We came to know human nature in this important respect.'"

W. T. HARRIS.

ADDRESS BEFORE THE N. E. A.—1898.

III

"To determine the curriculum, we must first decide what end we have in view. Granted that we want our children to become useful and well-informed, to have worthy ideals, and to be healthy and happy, to attain these ends we must consider both the knowing mind and the world of ascertained truth."

"The social and religious interests may be satisfied by Bible teaching, imaginative literature, history, and language. The speculative and exploring interests demand geography, nature study, and experimental science; also practical work in school, garden and laboratory. The reasoning or logical interest may be met by the study of number, calculation, measurement, arithmetic, geometry, and algebra. The artistic and constructive interests demand opportunities for expression in singing, reciting, acting, brush-work, drawing, modelling, weaving, wood-carving, carpentering; also practical domestic

work, needlework, cookery, laundry-work and simple house-work, care of garden plants, animals, etc. Some forms of play and physical exercises are also important."

"Play and necessity are the chief means of learning, and children who are free from necessity must develop chiefly through play."

C. J. DODD.
THE CHILD AND THE CURRICULUM—1906.

IV

"Each subject of the curriculum is but an aspect of the whole idea—life. . . .

"The world of experience is one, not many. . . . Hence the demand of the new pedagogy, supported heartily by the new sociology, that schooling, especially in its earlier stages, shall be changed from an afflictive imposition upon life to a rationally concentrated accomplishment of a portion of life itself. . . . Sociology has no tolerance for the pedantry that persists in carpentering together educational courses out of subjects which are supposed to exercise, first, the perceptive faculty, then the memory, then the language faculty, then the logical faculty, etc., etc. . . . Our business as teachers is primarily not to train particular mental powers, but to select points of contact between learning minds and the reality that is to be learned. . . . Pedagogy should be the science of assisting youth to organize their contacts with reality . . . by both thought and action, and for both thought and action. . . . It is the teacher's business to help the pupil to understand this whole environment as it is related to himself. . . . One of the discoveries which pupils should be aided to make, in their study of any time, or nation, or human process, should be that . . . 'No man liveth unto himself' . . . (also that) 'the roots of the present are deep in the past' (and consequently) that the present cannot escape responsibility for the future."

ALBION W. SMALL.
THE DEMANDS OF SOCIOLOGY UPON PEDAGOGY—1910.

V

"A course of study has two main purposes: to preserve the unity of the system (for economic reasons) and to serve as a guide to the individual teacher. For both these ends it should be mandatory and prescriptive as to fundamentals but broad, free, suggestive, and stimulating as to details and methods."

More specifically, for the preservation of sufficient unity of the system. . . .

There is "a necessary minimum."

Content, or stress, or both, should differ for children from poor homes and children from rich homes. . . .

To serve as a satisfactory guide to the daily work of the teacher, the course should:

"Provide or suggest a body of knowledge and a range of activities, the latter (calling for) free exercise of (the teacher's) judgment and initiative. . . .

"Require the teachers to study the course itself, in order to comprehend it, and to study outside the course for help in administering it. . . .

"Throw as many side-lights as possible upon the subjects.

"Indicate sources of information and point out possible correlations. . . .

"Suggest methods of approach and various means of illustration and . . . expression."

CHARLES B. GILBERT.
WHAT CHILDREN STUDY AND WHY—1913.

VI

"Education may be tentatively defined, then, as the process by means of which the individual acquires experiences that will function in rendering more efficient his future action. . . . The standard of social efficiency must be rigorously applied to the products of the school. The school must fit the individual, not for the life of the past, nor for a remote Utopian future, but for the immediate

future, the requirements of which can be predicted with reasonable certainty. If it fails to do this, the school cannot justify its existence."

W. C. BAGLEY.
THE EDUCATIVE PROCESS—1905

VII

"The elements in it (a general education) that need intensive treatment are esthetic appreciation and production leading to mental stability and repose, and a physical education which will insure good health under the stress of modern industrialism."

"Education makes life mean more to the worker only when it has taught him to use his leisure in such a way that the spiritual element in his personality is developed."

M. W. KEATINGE.
STUDIES IN EDUCATION—1916.

VIII

"All little children have certain common needs; but, beginning with adolescence, education is full of alternatives.

"Aside from the simply instrumental studies—reading, writing, spelling, and figuring—the curriculum of the modern school would be built out of actual activities in four main fields . . . science, industry, esthetics, civics."

A. FLEXNER.
A MODERN SCHOOL—1916

IX.

"An ideal curriculum may be conceived to be a group of problems of vital interest to children and dealing with the fundamental aspects of knowledge, but at present we are able (in the Horace Mann School) only to approximate such an ideal."

H. C. PEARSON.
CURRICULUM OF HORACE MANN SCHOOL—1913.

X

"Education is now to develop a type of wisdom that can grow only out of participation in the living experiences of men. . . . It must, therefore, train thought and judgment in connection with actual life-situations. . . . It is also to develop the good will, the spirit of service, the social valuations, sympathies, and attitudes of mind necessary for effective group-action where specialization has created endless interdependency. It has the function of training every citizen, man or woman, not for knowledge about citizenship, but for proficiency in citizenship; . . . not for a mere knowledge of abstract science, but for proficiency in the use of ideas in the control of practical situations."

"Play is nature's active mode of education."

"One's horizon is narrow, and most of this world lies beyond, and stretches backward through history. Most is to be explored vicariously in imagination on the basis of the reports of others. For this, pupils need books that vividly reconstruct the experience of others."

There are "two levels of educational experience"—the play-level and the work-level—"both of which are essential to fullness of growth, efficiency of action, and completeness of character. . . . Both are factors in developing the individual's work powers. Play comes earlier and lays the foundations; and may continue throughout life alongside or mingled with the work for maintaining the foundations."

"Seen biologically, children's play was—and is—the most serious function of childhood."

"The curriculum of the schools will aim at those objectives that are not sufficiently attained as a result of the general undirected experience."

"Each (child) is to be a producer to the extent that he consumes. . . . The purpose of occupational education is the removal through general enlightenment of the injurious or destructive labor conditions. . . . Self-interest . . . is the steam which runs the whole machine. . . . (But) on

the one hand, there is a narrow, ignorant, materialistic self-interest; and on the other, an enlightened, humanistic self-interest, characterized by wide social vision, which recognizes that individual welfare at its highest comes only through general community welfare at its highest."

"Education under the circumstances has, therefore, a double task to perform: (1) to act as a primary agency of social progress, lifting the occupational world to a higher and more desirable level; (2) to do this by educating the rising generation so that they will perform their occupational functions in a manner greatly superior to that of their fathers. The task is . . . to look, not merely to the actual practices, but rather to those that ought to be."

"Education must proceed by the active route. . . . The first problem—a most baffling one—is to draw up a curriculum that will with certainty forge an enduring and vitalized large-group consciousness . . . (and the only way to do this is) . . . to think and feel and act with the group, as a part of it, as it performs its activities and strives to attain its ends."

"The curriculum-discoverer will first be an analyst of human nature and of human affairs. . . . His first task . . . is to discover the total range of habits, skills, abilities, forms of thought, valuations, ambitions, etc. (needed) for the effective performance of vocational labors, for civic activities, health activities, recreations, language; for parental, religious, and general social activities.

"The program of analysis . . . will be as wide as life itself. . . . It must be kept in mind in considering methods that knowledge is not the most fundamental thing aimed at; but rather social attitudes and valuations."

FRANKLIN BOBBITT.
THE CURRICULUM—1918.

XI

"His (the child's) world is a world of persons with their personal interests, rather than a realm of facts and laws."

"The child's life is an integral, a total one. He passes quickly and readily from one topic to another, as from one spot to another, but is not conscious of transition or break. . . . The things that occupy him are held together by the unity of the personal and social interests which his life carries along. . . . He goes to school, and various studies divide and fractionize the world for him. . . . Facts are torn away from their original place in experience and rearranged with reference to some general principle. Classification is not a matter of child experience; things do not come to the individual pigeon-holed. . . . The studies as classified are the product of the science of the ages, not of the experience of the child."

"What, then, is the problem? It is just to get rid of the prejudicial notion that there is some gap in kind—as distinct from degree—between the child's experience and the various forms of subject matter that make up the course of study. . . . The child and the curriculum are simply two limits which define a single process."

"Guidance is not external imposition. *It is freeing the life-process for its own most adequate fulfillment.*"

"The child is expected to 'develop' this or that fact or truth out of his own mind. He is told to think things out or work things out for himself, without being supplied *any of the environing conditions which are requisite to start and guide thought.* . . . The problem of direction is thus the problem of selecting appropriate stimuli for instincts and impulses which it is desired to employ in the gaining of new experience. What new experiences are desirable and thus what stimuli are needed, it is impossible to tell . . . except, in a word, as the adult knowledge is drawn upon as revealing the possible career open to the child."

"What concerns . . . (the) teacher is the ways in which a subject may become a part of experience. . . . He is concerned, not with the subject matter as such, but with the subject matter as a related factor in a total and growing experience. Thus to see it is to psychologize it."

Subject matter must be "translated into life-terms."

"There is no such thing as sheer self-activity possible —because *all activity takes place in a medium,* in a situation, and with reference to its conditions. . . . Now, the value of the formulated wealth of knowledge that makes up the course of study is that it may enable the educator *to determine the environment of the child,* and thus by indirection to direct."

JOHN DEWEY.
THE CHILD AND THE CURRICULUM—1902.

XII

"I believe, therefore, in the so-called expressive or constructive activities as the center of correlation."

. . . . . .

"I believe, finally, that education must be conceived as a continuing reconstruction of experience."

JOHN DEWEY.
MY PEDAGOGIC CREED—1910.

XIII

The Elementary School of the University of Missouri, under the direction of Prof. J. L. Meriam, has for "its fundamental idea, that education shall follow the natural development of the child. . . . He believes that . . . the life there should be like, only better than, the life of the children outside the school; better because they are helped to know how to play and work correctly and to do it with other children."

J. AND E. DEWEY.
SCHOOLS OF TO-MORROW—1915.

XIV

"The first office of the social organ we call the school is to provide a simplified environment. It selects the features which are fairly fundamental and capable of being responded to by the young. Then it establishes a progressive order, using the factors first acquired as means of gaining insight into what is more compli-

cated. In the second place, . . . it establishes a purified medium of action. Selection aims not only at simplifying but at weeding out what is undesirable. . . . In the third place, it is the office of the school environment to balance the various elements in the social environment and to see to it that each individual gets an opportunity to escape from the limitations of the social group in which he was born, and to come into living contact with a broader environment. . . . The school has the function also of coördinating within the disposition of each individual the diverse influences of the various social environments into which he enters. One code prevails in the family; another, on the street; a third, in the workshop or store; a fourth, in the religious association. As a person passes from one of these environments to another, he is subjected to antagonistic pulls, and is in danger of being split into a being having different standards of judgment and emotion for different occasions. This danger imposes upon the school a steadying and integrating office.

"The development within the young of the attitudes and dispositions necessary to the continuous and progressive life of a society cannot take place by direct conveyance of beliefs, emotions, and knowledge. It takes place through the intermediary of the environment.

"That education is not an affair of 'telling' and being told, but an active and constructive process, is a principle almost as generally violated in practice as conceded in theory. Is not this deplorable situation due to the fact that the doctrine is itself merely told? It is preached; it is lectured; it is written about. But its enactment into practice requires that the school environment be equipped with agencies for doing, with tools and physical materials, to an extent rarely attained. It requires that methods of instructions and administration be modified to allow and to secure direct and continuous occupations with things. . . . Children proverbially live in the present; that is not only a fact not to be evaded, but it is an excellence. The future just as future lacks urgency

and body. To get ready for something, one knows not what nor why, is to throw away the leverage that exists, and to seek for motive power in a vague chance. . . . A curriculum which acknowledges the social responsibilities of education must present situations where problems are relevant to the problems of living together, and where observation and information are calculated to develop social insight and interest."

JOHN DEWEY.
DEMOCRACY AND EDUCATION—1916.

XV

"Since a school is a miniature community preparing for life in the larger community called society, the aims of a school should correspond with those of society." These may be stated as:

1. Health.
2. A combination of learning with "doing."
3. The devlopment of tastes or of permanent interests.
4. A tolerant, open mind, sound judgment, ability to execute plans, habits of service, energy, sociability, and tact.

"The two most prominent controlling ideas in the selection of studies and of topics under them are the requirements of society (including, of course, its ideals as well as its present practices) and the nature of children."

"The course of study (of the common school) is to a large degree an inherited misfit from the past, supported by a crude conception of utility, an outworn psychology, and a blind optimism," with two aims:

1. To prepare for the distant future.
2. To furnish good mental discipline.

"The first reform needed is a changed attitude on the part of the teacher toward present time. . . . The next thing is to investigate what is going on about the school, for the purpose of finding live topics that may become a part of the regular curriculum. . . .

"Our leading line of work (in Speyer School) for the

first two years is the observation and reproduction of surrounding occupations; then follow primitive life and history. . . . The nature of the children calls for a more active reproduction of surrounding occupations and of primitive habits than words alone allow; consequently materials of various sorts are continually used for that purpose. . . .

"Is it not high time that those interested in the elementary school agree as to what shall be left out, and make the list a very large one?"

FRANK M. MCMURRY.
CONTROLLING IDEAS IN THE SCHOOL (SPEYER SCHOOL)
In Teachers' College Record for 1902. No. 5.

XVI

Criteria for "judging curriculums and syllabi.

"1. Bases for relation of subject matter to children's interest.

"2. Initiative evoked in teachers and children.

"3. Organization of subject matter. . . . Avoidance of isolated facts.

"4. Attention to relative values."

FRANK M. MCMURRY.
ELEMENTARY SCHOOL STANDARDS—1914.

XVII

"That social efficiency which is the aim of the School involves two basic principles of organization, namely:

"1. The curriculum of the School should represent the needs and interests of present-day life in our own immediate environment and the world at large, the *social* factor.

"2. The work, at any given stage of the child's development, should be that which is adapted to the immediate enrichment of his life as measured by his individual needs and capacities, the *psychological* factor.

"Corollaries. A. In content offered, the school should be really *democratic,* providing material and means for the

development of the *concrete* thinkers, the children who can manage *things,* and the children of *action,* those who can manage *affairs* and *persons,* as well as of the *abstract* thinkers, the children who manage *ideas* and think easily in terms of symbols.

" B. In method of procedure, provision should be made for active participation in the processes of real life as this life maintains itself in our time and as it has developed in its evolution from simple beginnings.

FREDERICK G. BONSER.
SPEYER SCHOOL CURRICULUM—1913.

Having reviewed these principles, let us see what embodiments they have found.

Here is a school teaching the three R's, with history, geography, physiology, drawing, and as many other subjects as the advocates of the " Knowledge is power " doctrine can force into the curriculum which they inherited.

There is the school of the extremists who would follow the child's lead, a zigzag path, not free from thorns, decidedly uphill for the teacher, if not for the pupil, with its termination veiled in the mists of uncertainty.

The curriculum maker of the third school believed that " some studies must be given to develop thought and others merely to furnish symbols or tools." [1] The divorce of tools from thought has resulted in a structure not merely disjointed but unorganized, and so unbalanced that it is likely to topple over.

Many schools, especially those in cities, will give us a glimpse of shop, perhaps of garden. True these are " tacked on," as it were—a fifth wheel to the wagon which carries the regular educational material. Their curriculum maker, having discovered that this type of

[1] N. E. Superintendents' Association—*Report of Committee, 1890.*

work may be made a mode of expression, has tried to use it, but he has grasped only half the truth.

Here is a school where "the unity of the system" is being preserved—interpreted as meaning cramming for the coming examination, so that all may pass to the next grade without friction to the system, no matter how many bruises, sprains, or fractures are suffered by those subjected to the treatment.

Look next upon this school where "minimal essentials" are emphasized. These are all carefully polished, locked up in books, and stored in little pigeon-hole periods of time, so that all the teacher has to do is to give the signal when the minute hand reaches the predestined dot upon the edge of the dial. Then out pop the forty books and up sit the forty children, to unlock these books with the key of effort and to dig out of them the "essentials" which seem to them so absolutely unessential. But these children pass the examination. What then? No one knows.

We need spend but little time on the two companion pictures which exemplify the theory that the education of the children of the poor and of the rich should differ, from their first day in school. Democracy claims that at least children should be free and equal—"equal" in the sense of equal opportunity, "free"—to live decently and to grow normally, in body, mind, and spirit. Any democracy is false to its ideals if it does not insist on the best possible schools for *every* child; and in a true democracy the private elementary school has no place except for purposes of experimentation, or for the demonstration of new methods which can not be admitted wholesale to the public schools until their worth is clearly shown.

This does not mean that there should be no special schools for the mentally or physically weak, or for a tem-

porary segregation of other special classes of children. But it does mean that segregation should never be on the basis of the parents' wealth. There is no doubt that the children of the rich need to learn, by association with children in other walks of life, the lessons of patience, moderation, and adaptation, as much as these other children need the example of refinement in personal cleanliness, manners, and speech, so that both have much to gain by education together. It is equally true that the fundamental bodies of knowledge, the life lessons, the basic experiences and their resulting development, which start the individual on his life journey, should be, on the whole, alike for all. Not that the individuals should thereby become alike, but that, in order that each may work with the other, in a sane and sympathetic way, for the good of all, they must have a common education, especially along the lines of the fundamental necessities for a well-rounded life.

At every step in the progress of this education, individual differences will assert themselves, and the school world will inevitably divide itself into the leaders and the led, living happily together. But the fact that this cleavage will not be along economic lines and that all will recognize the division as natural and just, will give rich and poor that respect and sympathy for each other which is the world's hope for final peace between the classes and the masses.

Here and there in this review we see proof of the turning of a new leaf in curriculum making, evidences that some of the guiding principles enunciated, or at least shadowed forth, by Rousseau, Pestalozzi, Herbart, and Froebel, and reaffirmed, clarified, strengthened, and added to, by our own leaders in educational philosophy, Dewey, Bonser, McMurry, and Bobbitt, are beginning to bear fruit, fruit which not only contains the seeds for coming

generations to sow and harvest, but which is in itself edible and nourishing.

The principles quoted on the foregoing pages themselves show so rambling, circuitous, and uncertain a course of development that it is not to be wondered at that teachers and administrators, seeking to break the shackles of tradition and embody these principles in actual schools, have not made direct and steady progress. Uncertainty marks every step; diverse aims and purposes conflict, in a most conscientious searching for the truth. The effect of this uncertainty upon the schools has been marked. Teachers and administrators are for the most part in the condition of the centipede:

> "The centipede was happy, quite,
> Until the toad for fun
> Said, 'Pray, which leg comes after which?'
> This worked her mind to such a pitch
> She lay distracted in a ditch,
> Considering how to run."

In the days of "general faculties," when the arithmetic we learned was supposed to enable us to reason better in selecting our food; when memorizing pages of poetry or history was supposed to help us remember that the square root of 144 is 12, or that there are three l's in "parallel"; there may have been justification for laying down such principles of curriculum making as—"Select the studies and the means of training which develop the greatest amount of mental and moral power"—"The school is an artificial environment created for the purpose of preparing the mind to be afterwards educated by the environment of life."[2]

The idea of wholesale transfer of ability from one

[2] N. E. Superintendents' Association—*Report of Committee, 1890*, pp. 4, 3.

field to another is held, even now, at least subconsciously, by a surprisingly large number of school men. But the newer psychology is attacking all but its ultimate sources and showing how small a part it really plays in education. In the words of Thorndike:

"The leading traditional doctrines of the disciplinary value of studies . . . are (1) that what is hard and distasteful to a pupil has disciplinary value for him; (2) that any subject has as much disciplinary value as any other, both being equally well taught; and (3) that what is otherwise indefensible has disciplinary value![3]

"The real question is not, 'Does improvement of one function alter others?' but, 'To what extent, and how, does it?'

"The answer which I shall try to defend is that a change in one function alters any other only so far as the two functions have as factors identical elements. . . . To take a concrete example, improvement in addition will alter one's ability in multiplication because addition is absolutely identical with a part of multiplication and because certain other processes—*e.g.*, eye movements and the inhibition of all save arithmetical impulses—are in part common to the two functions. . . . By identical elements are meant mental processes which have the same cell action in the brain as their physical correlate."[4]

In most educational programs, play is set off by itself as a means of physical development or of recreation. That it is a necessity for mental development is rarely recognized. Usually it is considered a "forbidden sweet," to be offered as a reward for work or drudgery accomplished. But the use of play to transform the disagreeable task into joyous self-expression is in accord with sound psychology. By utilizing the play spirit in planning school work for children, we harness many of

[3] Thorndike—*Educational Psychology*, Vol. ii, p. 422.
[4] *Ibid.*, p. 358.

nature's most fundamental impulses, and we minimize fatigue. Thorndike says:

"Play, in any one of the common meanings of the word, is more original, less a product of training, than the occupations which are distinguished as work.[5]

"Work in the popular sense is distinguished from play or recreation less by the amount of positive action than by the amount of restriction. We are fatigued by what we do *not* do. . . . The little child who complained 'I am tired of not playing,' expressed admirably one feature of fatigue."[6]

Another element to be considered in planning for the time spent by children in school is the environment. Attempts to break down the rigid formality of the schoolroom are being made in various ways, for it seems almost impossible to form bonds which the child will use in his extra-school life unless these connections are made in an environment approximately like that of the world outside the school walls. Therefore the creation of a suitable environment is one of the first duties of the educator. For—

"Learning is connecting; and teaching is the arrangement of situations which will lead to desirable bonds and make them satisfying."[7]

"The laws of connection-forming or association or habit furnish education with two obvious general rules: (1) Put together what should go together and keep apart what should not go together. (2) Reward desirable connections and make undesirable connections produce discomfort. Or, in combined form: Exercise and reward desirable connections; prevent or punish undesirable connections."[8]

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[5] Thorndike—*Educational Psychology*, Vol. i, p. 144.
[6] *Ibid.*, Vol. iii, p. 124.
[7] *Ibid.*, Vol. ii, p. 55.
[8] *Ibid.*, Vol. ii, p. 20.

"There is no arbitrary *hocus pocus* whereby man's nature acts in an unpredictable spasm when he is confronted with a new situation. His habits do not then retire to some convenient distance while some new and mysterious entities direct his behavior. On the contrary, nowhere are the bonds acquired with old situations more surely revealed in action than when a new situation appears."[9]

"The original tendencies of certain states of affairs to satisfy or to annoy are among the most potent determinants of human behavior and of those changes in it which result from education. Satisfaction and discomfort are, in fact, the great educative forces. . . . The original tendencies whereby this satisfies and that annoys are thus the ultimate selective forces in human behavior, providing the first rewards and punishments for education's use. From them, directly or indirectly, all later wants, interests, and ideals derive their motive power. There is no other means of arousing zeal for a given course of thought or conduct than by connecting satisfaction with it; the mind does not do something for nothing." [10]

But were we to try to build a curriculum on psychological principles alone, the story would be but half told. For each individual is but an infinitesimal organism in the universe, and, as Thorndike says:

"Ultimately, indeed, every fact in human life is a case of the co-action of all the universe except the man in question, and the condition of the man in question at that instant." [11]

Then to the environment and to the scientific study of that environment in relation to mankind, or *vice versa,* must the curriculum maker go for further help. To the principles of psychology he must add the principles of

[9] Thorndike—*Educational Psychology,* Vol. ii, p. 28.
[10] *Ibid.,* Vol. i, p. 295.
[11] *Ibid.,* Vol. i, p. 10.

sociology, that science which puts the breath of life and activity into groups of men and things, that science whose true mission it is to bring to light proper relations of man to man and of man to things. True, sociologists, like educators, have dwelt too long in the clouds of theory, but they are now beginning to see that sociology is really a concrete science, dealing with the practical relations of man to man and of man to his food, clothing, and shelter.

How does sociology help the curriculum maker? If it be a passive, theoretic sociology, it will continue to contribute merely abstruse, infertile principles, incapable of functioning. If it become active, practical, it will not only largely determine the course, but will plainly point the way to method. It will say to the educator: "Schools must prepare the individual for life. Since this is their function, they must teach the facts of life, and that not through books alone, nor even chiefly, but through participation in life experiences." Sociology further says that society demands results, which are to be measured by but one standard, efficiency. Every individual taken into the schools must become efficient. Nor may we stop here; efficiency must be defined for the curriculum maker. Let us say, then, "By efficiency we mean that composite of qualities, abilities, or controls which makes the individual (1) physically, (2) intellectually, (3) emotionally, (4) morally, and therefore (5) socially fit.

For *physical* fitness, modern society demands that schools not only preach health—which most of them have done—but that they teach health by establishing proper health habits, strengthening the desirable bonds that already exist in the individual and forming new ones in such situations as are not already bonded or are improperly bonded. For instance, the child will learn to masticate food properly because he has frequent opportunities to do so in school. He will know the composition

of wholesome meals, because he often helps in the preparation of such meals in school. He will habitually develop muscle and red corpuscles, by playing often and playing long, both indoors and out, both in the organized game and in the free exercise of his instincts. He will establish habits of institutional cleanliness in helping day by day to keep his environment free from disease-breeding filth as well as from unsightly litter. In the doing, he will learn the whys and wherefores. He will see that helping to keep his neighbor healthy is as much a duty as is his own avoidance of weakness and disease.

A gradual increase of responsibility and participation will so deeply root these lessons that the child, helping to maintain the health of his own little community, will grow without effort, almost without consciousness, into the adult public health worker. As soon as the schools give proper education along these lines, the state can minimize the number and the duties of its health officials and its nurses.

For *intellectual* fitness, modern sociology backs modern psychology in demanding that the mind of the individual be developed to the maximum, so that he may contribute his full quota to the intellectual life of society. In more concrete terms, this means teaching the individual so to develop his original mental equipment—his instincts of curiosity, manipulation, mental control, and multiform mental activity—by means of actual life situations, his responses to which are always carefully guided, that he inevitably becomes a larger contributor to human welfare by reason of his wise choices, his sane judgments, his broad sympathies, his high ideals.

This intellectual fitness begins with the individual's needs as the drives and ends with society's needs as the larger aim. Thorndike says:

"Intellect is not dignified by denying its natural origin or by removing it beyond usefulness to the crudest and trivialest of the wants of living men." [12]

Since the wants of man, then, contribute so largely to his intellectual development, they surely must play a large part in the curriculum.

To bring about *emotional* fitness, the business of the school is (*a*) to kill off or redirect undesirable emotions; (*b*) to develop the desirable ones. Psychologists themselves do not agree as to the true nature of emotions; they do not even make out identical lists of known emotions. Hence it seems unwise to attempt any discussion of the psychology of the emotions. However, the results of emotional responses are very apparent, especially among school children. These results, sometimes leading to physical as well as intellectual handicaps, prove the undesirability of overstimulation of the emotions.

How can the curriculum make the individual *morally* fit? Through direct instruction? Let us hear Dewey on this point:

"To attempt to get similar (*i.e.*, satisfactory or effective) results from lessons about morals, in a democratic society, is to rely upon sentimental magic." [13]

He summarizes what seems to be the consensus of opinion in the following words:

"Discipline, natural development, culture, social efficiency, are moral traits—marks of a person who is a worthy member of that society which it is the business of education to further. There is an old saying to the effect that it is not enough for a man to be good; he must be good for something. The something for which a man must be good is capacity to live as a social member so that what

[12] Thorndike—*Educational Psychology*, Vol. i, p. 310.

[13] Dewey—*Democracy and Education*, p. 411.

he gets from living with others balances with what he contributes. . . . Discipline, culture, social efficiency, personal refinement, improvement of character, are but phases of the growth of capacity nobly to share in such a balanced experience. And education is not a mere means to such a life. Education is such a life. To maintain capacity for such education is the essence of morals." [14]

This, translated into terms of the curriculum, means that provision must be made for—

"Indirect and vital moral education—the development of character through all the agencies, instrumentalities, and materials of school life." [15]

How may the curriculum make an individual *socially* fit? This question really has already been answered, for the physically, intellectually, and morally fit *are* the socially fit, and *vice versa*. Social fitness means a natural, easy adjustment to the social framework. Let us call that framework the institutions of society, which might be considered its limiting, confining agencies.

For the purpose of clarifying thought, let us liken society to an elaborately mullioned stained-glass window, each section contributing to the beauty and unity of the whole, yet each section a unit, separate and distinct. Some of these sections will contain the chief figures, the centers of interest in the picture; others will be but supporting elements, enhancing such lights as need to be emphasized, toning down portions which in themselves are too glaring. So in a society some institutions constitute the high lights of the picture; others are secondary, yet vitally necessary to the whole.

When one section of the picture becomes loosened from the others, or weakened in structure, or broken, or lost from its mullion, the harmony of the whole is de-

[14] Dewey—*Democracy and Education*, p. 417.

[15] Dewey—*Moral Principles in Education*, p. 4.

stroyed. It is the business of each institution to prevent this calamity. On the shoulders of what individuals does the responsibility lie? Some might say on those of the authorities or high officials of the institution. Others might hold all the adult members of the institution responsible. In truth, both are necessary for holding their own institution together, and for holding it in its proper relation to the others.

To consider the methods by which this end may be attained, their successes and failures, the evidence of their weaknesses and strengths, would carry this discussion too far afield. The point which is pertinent to the problem now in hand is that education is not so much concerned with the present composition of the social picture, which is comparatively fixed, as with the picture of the near future, when the boys and girls of our schools shall have become adults. The distribution of light and shade, the texture and rhythm of line, the warmth and harmony of color, in this picture which is to be, will be determined largely by the schools of to-day and to-morrow. Surely the successes and failures of educational yesterdays, as well as those of to-day, must be thoughtfully considered, if the picture of the future is to show improvement.

Of all the social institutions, the school stands out as most important here, for it not only contains the pigments of the coming social picture but is training many of the artists destined, let us hope, to mix these paints, as did Turner, " with brains." The school teacher of to-day may be considered the master artist who, inspired by the vision of the wonderful mullioned window which may be, will so use the content and method of the curriculum as to prepare youth to be the better artists of a larger future.

The work of preparation takes on a more complicated aspect when we realize that the embryo artists are

still members of the old society and must live in it without too greatly disturbing its harmony or their own peace. Moreover, they are under obligation, with increasing age, to contribute to the improvement of the present picture. This repair work must go on side by side with the creation of the new picture, or, rather, the new picture must grow out of the old. Fortunate, indeed, is that society where the change is purely evolutionary, one picture fading into the other like a dissolving view.

Now how does the school function in making the individual socially fit? So far as the curriculum, the educating instrument, embodies experiences which are social in that they are common to all members of society, and so far as the teacher selects methods, or modes of dealing with this social material, which run parallel with those of life outside the school, just so far is the curriculum defined in terms of social efficiency.

Having considered in some detail the psychological and the sociological principles which should guide the curriculum-maker, let us summarize their counsel in the form of—

Ten Working Principles for Teaching

I

All of the native equipment of the child should be utilized.

II

Nature's motive power, the play spirit, should furnish the drives for children's activities.

III

Through play the child should be led to habits of happy, useful work.

IV

A curriculum should be founded not entirely on the traditions of the past, but also on the needs of the present and the future.

V

The necessities common to children in all localities should determine the universal framework of the curriculum, details being fixed by the varying conditions of environment.

VI

The school environment should be so planned as to duplicate total life experiences, rather than fragmentary or partial experiences.

VII

The interest aroused by such an environment should then be allowed to direct thought and organize the life of the school.

VIII

The so-called subjects of the curriculum—reading, writing, arithmetic, etc.—should be taught as inter-related phases of life, the psychological rather than the logical order being followed in this teaching.

IX

Abundant opportunity should be provided for such doing as shall stimulate thinking, and thus lead to further doing and thinking.

X

Group consciousness and group sympathies should be developed, not only through group activities in the life of the grade but through frequent coöperation between grades.

SECTION IV

THE OUTCOMES OF CURRICULUMS

A. ANALYSIS OF ACHIEVEMENTS UNDER THE PROPOSED CURRICULUM

In the diagram below, the numbers indicate the pages on which each subject begins in each grade, enabling the reader to trace one subject easily and quickly through the three grades, and to see at a glance what subjects are treated in each grade.

Grades	Facts taught									Skills begun	Habits, attitudes, appreciations, ideals
		In the major projects									
	In the introductory project — Playing Fair	Social Life and Hygiene	Industrial Arts	Fine Arts	Physical Education	Music	English	Arithmetic	Nature Study and Elementary Geography	Very little organization has been attempted in the lists under these headings, owing to the frequent overlapping of classes of skills, of habits, of attitudes, of appreciations, and of ideals.	
I	230	239	240	243	244	244	245	245	—	234, 235; 247	237, 238; 249
II	230, 231	252	253	255	256	257	257	258	—	234, 236; 262	237, 238; 265
III	230, 233	266	268	270	271	271	272	273	275	234, 236; 276	237, 238; 278

B. COMPARISON OF ACHIEVEMENTS UNDER DIFFERENT CURRICULUMS

It would be illuminating to compare the outcomes of this curriculum with those of the most progressive courses of study now in use; for instance, that published by the State of Minnesota in 1916 and revised in 1918, and those

issued by the Montana State Department of Public Instruction in 1919 for rural schools and in 1920 for city elementary schools.

But a true comparison is not within the writer's power, since she has not herself lived through these courses, and a statement of actual results by those who have obtained them is not available. A course of study gives the seed to be sown; outcomes are the harvest of the year's growth. Moreover, the fundamental differences of organization between the curriculum here proposed and those of Minnesota and Montana would preclude a detailed comparison, grade by grade, even if the outcomes were available.

I. THE INTRODUCTORY PROJECT—PLAYING FAIR

1. Facts Taught

(a) in the three grades

Reasons why states and counties hold fairs
The kinds of things exhibited and done at fairs
The way fairs are arranged for and managed

(b) in the first grade

Animals
  Domestic—cow, pig, sheep, horse, hen, duck
    Usefulness
    Habits
    Care of
  Wild—elephant, tiger, bear, giraffe, lion
    Appearance
    Homes
  Animal stories, *e.g.*, "The friendly cow," "The little red hen"
Fall flowers
  Recognition
  Proper treatment
  Collection of seeds for next year's planting
  Flower stories—"Clytie's garden," "Mary, Mary, quite contrary"

Fall vegetables and fruit—tomatoes, corn, beans, beets, celery, pumpkins, apples, pears, peaches, peanuts
  Parts used
  Cleanliness in preparing for table or preserving
  How grown
  How saved for future use
Peanut stand
  The number 10—peanuts counted out for each bag
  The number 5—5 cents = 1 nickel, price per bag
  How peanuts grow
Side show
  Many stories heard, in order that the children might choose the best for dramatization
  "Three little pigs" and "Simple Simon" (S sound taught from this jingle) chosen by vote
Merry-go-round
  Term and game *Carrousel*
Tickets for merry-go-round and side show
  Terms *oblong, longer than wide*
Signs or labels—posters by courtesy—for first grade's contributions to fair
  Terms—*animals, flowers, vegetables, fruits,* etc.

(c) IN THE SECOND GRADE

Kinds of fences—wood, iron, stone
  Purpose—protection
  The circle—form of fair enclosure
    Measuring the circumference with a string
      12 yards to go around 18 children in grade
      12 yds. = 36 ft. ..... $12 \times 3 = 36$
      2 ft. to be made by each child
        2 ft. = 24 inches ..... $2 \times 12 = 24$
        9 inches, height of fence
  Means of supporting fence
    Selection of material and ways of making things must depend on the purpose

Race track
  A circle about 27 inches in diameter
    Circumference 84 inches (measured as before)
    4 in.—width of track
    2 in.—depth of track
Grand stand
  "Tiers of seats" taught
      Reason for slant
  Reason for curved shape
  Need for firm foundation
Race horses, sulkies
  Characteristics of racing horses
  Appearance of sulkies
    Why used for racing
  Racing games
    Two abreast—$2 \times 9 = 18$
    Three abreast—$3 \times 6 = 18$
    Relay races
    Sulky races—children divided into groups of three
Ferris wheel—another circle
  Samples submitted and judgments made
  Why people are not spilled out of the little carriages
      Introduction to the force of gravity
  Spelling, writing, and memorizing the "Ferris wheel song"
Side show—a dramatization
  Reading a number of stories to find an appropriate one—"The little pig's house"
  Kinds of animal homes
Tickets for races, wheel, and side show
  Oblongs, three different sizes
  Words—*tickets, cents, September, grand stand, races, Ferris wheel, side show; cts. = cents*
  Prices of tickets
    5 cents = 1 nickel—$1 + 1 + 1 + 1 + 1 = 5$; $5 \times 1 = 5$
    2 nickels = 1 dime—$5 + 5 = 10$
    15 cents—$5 + 5 + 5 = 15$; $3 \times 5 = 15$; $10 + 5 = 15$

Posters
- Oblongs, 9 in. × 12 in.
  - Margins—¾ inch, top and sides; 1 inch, bottom
- Terms—*Ferris wheel, side show, races,* etc.

(d) IN THE THIRD GRADE

Plans
- Initial steps of map or plan making
- Necessity for plans, especially in laying out coöperative work
- Location of the various features—paths, buildings, race-tracks, etc.
- Terms—*paths, main building, ticket-booth, fence, main entrance, farm animals, chicken house, side shows, race track, grand stand*
- Committees for different pieces of work

Tickets
- Terms—*oblong, rectangle*
  - *Training School Fair*
    - *Friday, October —, 1918*
  - *Admission—25 cts.*
- Standards for good ticket selling
  - Accuracy in making change
  - Quickness—ability to handle large crowds
- Pieces of money—dollar, half, quarter, dime, nickel, penny
  - 25 cts. = quarter. $5 \times 5 = 25$; $2 \times 10 + 5 = 25$; 25 pennies; $2 \times 25 = 50$ cts.; $4 \times 25 = 100$ cts.; $2 \times 50 = 100$ cts. = 1 dollar = $1.00
- Change from 50 cents; from 1 dollar

Automobiles and aeroplanes
- Structure noticed and studied in preparation for the making
- Pictures brought or made, for posters
- Both names learned, to put on posters

Buildings and tents
  Free construction
  Review of paper and cardboard construction of buildings
  Proportionate size
    Of building to its use
    Of one building to the others
  Placing of windows
Preserved food exhibit
  Fall fruits and vegetables studied to this end
    Names of all varieties met
    Time for planting and for gathering
  Methods of preserving for winter use
    Drying, canning, preserving, pickling
  Requisites for preserving
    Degree of heat necessary for each mode
    Amount of sugar
    "Airtightness"
    Prevention of mold
  Precautions against and remedies for accidents
    Burning fruit or fingers
    Cutting fingers
    Setting kitchen afire
Arrangements for races
  Types of races

Individual, Team, Inter-grade	Usual or conventional, Original or home-made	Physical, Mental

Side show
  A story selected for dramatization after a careful try-out of a number suggested by the children

2. Skills Begun

(a) in the three grades

Relating experiences simply and clearly
Measuring and ruling—oblongs for tickets
Cutting cardboard for tickets

Printing tickets
Racing—in preparation for inter-grade contests

(b) IN THE FIRST GRADE

Drawing—freehand and tracing
  Animal and flower forms, vegetables and fruits
Coloring (crayola)
  Same forms as above
Cutting out
  Same forms as above
  " Props " for the cardboard animals
Pasting
  Mounting pictures of flowers
  Attaching " props " to the animals
Modeling in clay and plasticene
  Animals, vegetables, fruits, peanuts, Clytie
Arranging flowers—living specimens and mounted pictures
Decorating room in other ways
Representing on sand table Clytie's garden, her home, and herself before and after her transformation
Varying of a game—Carrousel
  Singing, humming a tune, selling and collecting tickets
Making paper bags for peanuts
Printing " Peanuts—5 cents " on bags
Making a peanut call
Writing *large* signs—" Animals," " Flowers," " Vegetables," etc.
Reading
  Clytie's garden (teacher's simple version—see Appendix, page 281)
  Simple Simon
  Peanut call (composed by children)
Hearing and retelling stories
Memorizing jingles
Making sentences
Dramatizing a story and a jingle

(c) IN THE SECOND GRADE

Measuring circle with a string; measuring string with ruler
Making samples of fences
Measuring and cutting—cardboard for fence chosen
poster to desired size
Handling ruler and yardstick
Clay work—modeling race-track (a flat circular strip)
modeling grand stand (tier of steps)
modeling horses (some, of plasticene)
Paper construction—sulkies
carriages for Ferris wheel
Reading—to find a story for dramatization as a side show
Dramatization—modulation of voice
gestures
Writing large, without lines (on posters)
Cutting down sentences to phrase form
Spelling and writing words used
Making plain figures
Making pictures, in some cases
Making a rhyme—rhythm, rhyme, appropriate words
Making music for the rhyme
Making change (Austrian method)

(d) IN THE THIRD GRADE

Drawing—plan or map
automobiles and aeroplanes
Making money, using penny, nickel, quarter, dollar, as models
Addition, Subtraction } involving 25 cts.—selling tickets and making change

25
25
25
25
$1.00 (introduction to carrying)

Construction of aeroplanes and automobiles, using wood, paper, cloth, cardboard, clay
Paper cutting and folding—building tents
Sewing—tents
Preserving food
  Gathering fruits from the garden
  Picking beets and tomatoes
  Canning and "preserving" peaches
  Drying corn, beans, and apples
  Washing fruit and hands, in preparation
  Peeling economically
  Heating to proper temperature
  Managing the fire
Tying up cut and burned fingers
Reading—to find story for dramatization
Dramatizing
Spelling and writing terms, *paths, main building,* etc.
Making automobile and aeroplane posters
  Reducing long sentences to equivalent phrases
Writing—letter to Dr. Savitz
    Good, pointed advertisements (see Appendix, p. 307)

3. Habits, Attitudes, Appreciations, Ideals

(a) in the three grades

Use of other methods of expression than verbal recital—concrete representation of Fair activities
Organization of ideas—(How play Fair?)
Decision by voting
Choosing those who excel as leaders
Weighing of values, *e.g.,* choosing a story for dramatization
Establishing standards of excellence
  e.g., choosing of work good enough for exhibition
Sharing pleasures with others
  e.g., playing Fair for mother

Courteous deference to authority
e.g., note to Principal asking a location for the Fair
Coöperation
e.g., contribution of effort by each grade
Choosing activities within one's ability
Appreciation of poetry and of music, developed—
(a) by hearing them; (b) by making them

(b) IN THE FIRST GRADE

Sympathy for all animals
Love for animals helpful to man
Esthetic arrangement and enjoyment of flowers
Appreciation of stories and jingles concerning animals and flowers, vegetables and fruits
Creative work
e.g., the peanut call

(c) IN THE SECOND GRADE

Establishing standards for selection
e.g., for the fence—cheapness, sufficient firmness to endure for time of fair, possibility of execution by all
for the grand stand—safety
Selection of fittest for a certain piece of group work—
e.g., making the race-track
Modification of this rule in case an individual ***needs*** the training involved in the work
Concise expression of thought
Accuracy in selling tickets, in writing or printing, etc.
Fair—*i.e.*, reasonable or just—prices for amusements

(d) IN THE THIRD GRADE

Realization of the necessity for planning work
Ability to handle people
Physically—in admitting crowds to the fair
Psychologically—in working with first and second grades in the planning and preparation of the Fair, appointment of committees, etc.
Initiative in planning and construction

Judgment in choosing materials for construction
Standards—purpose
durability
appearance
Thrift—buying food when plentiful and preserving for later use
peeling and cutting economically
Regard for the attractive appearance of food
" Safety first " in using gas stove
Readiness in emergencies—handling cuts and burns
Rapidity of movement and thought—physical and mental races
Concise expression of thought
Accuracy in selling tickets, in writing or printing, etc.

II. THE MAJOR PROJECTS

1. First Grade Major Project—Playing Families

(a) facts taught

Social Life and Hygiene

Organization of families
Mother and father essential
Other members varying
Names of members of families
Animal families—bird, bear, goat, pig, cow
Club organization—president, assistants, reports of meetings
Duties of each member of the family; of one family to others
Care of the head
Frequent brushing and combing
Frequent washing with hot water and ivory soap
Doll families—members to parallel those of first-grade families
Dressing the doll families
General topic of appropriate dressing
Care of clothing

Paying bills
Going to housekeeping
  Good taste in furniture
  Good taste in pictures, curtains, rugs, etc.
Care of homes—light, ventilation
Proper use of each room
  Care of each
  Entertaining
Daily duties and activities
  Rising (bathing)
  Meals (table etiquette)
  Being on time at business
  Being neat and "well groomed" for business and for home life
  Work activities of different kinds acted out
Weekly customs of each family
  Each day of the week dramatized (variations in different families)
Special holidays—ways of celebrating
Family trips—to museum, park, etc.
Family reunion (used finally as a unit in the pageant)

Industrial Arts (Content Side)

[For much of the "doing" side, see SKILLS, page 247]

Making of badges for clubs
  Kinds
  Materials to be used
  Forms
Making of families
  Kinds possible
  Selection of stocking type of doll
    Stockings
      Parts—foot (toe, heel); leg
      Kinds—cotton, wool, silk
      How to cut without waste
  Planning directions

Dressing of doll families
  Names of garments needed—union suits, dresses, shirts, trousers, petticoats, capes, coats, hats, caps, shoes, stockings
  Names of parts of each garment
  Union suits
    Need for
    Materials—cotton, wool, silk, silk and wool
    Patterns—need, use
  Other garments
    Selection of styles from fashion book
    Essentials of good taste—color, line, decoration, appropriateness
  Materials for garments
    Simple study of cotton, linen, wool, silk
    Recognition of each
    Sand-table work—" Baa, baa, black sheep," " Little Boy Blue," " Mary had a little lamb "
  Hats and caps
    Materials—straw, raffia, silk, velvet, crinoline, stockinette
    Sources of each
    Recognition of each
Christmas preparations
  Study of evergreens
  Christmas tree decorations
  Sand table—" 'Twas the night before Christmas "
Making of homes
  Kinds of homes possible
  Selection of the kind within children's ability to make
  Arrangement of boxes decided
  Doors and windows
    Need for
  Tool study—brace-and-bit, hammer, saw

- Inside finish
  - Window and door frames planned for
  - Surbases
  - Sandpapering, need for
  - Varnishing
  - Wall papering
    - All-over pattern discouraged
    - Plain paper encouraged
    - Borders allowed
    - Criteria for judging
      - Making the room seem larger
      - Making the room seem more cheerful
      - Pleasing the greatest number
- Outside finish
  - Kinds—brick, cement, pebble-dash, frame
    - Source of each material used
    - Manufacture of each
  - Painting of all wood surfaces
  - Roofs—waterproof material
    - Tar paper
    - Tin
    - Shingles
  - Piazzas and porches
    - Where needed
    - How made

Furnishing of homes

- Sanitary fixtures
  - Need for
  - How made
- Furniture for each room
  - Names of pieces needed
  - Trip to the furniture store downtown
  - Selection of wood
  - Plans

Rugs
  Rooms to be measured to decide the size of rugs
  Decision to buy because no time to make
  How to select from the store
Curtains, bureau scarfs, and sideboard coverings
  Usefulness and beauty
  Selection of material—kind and quantity
  Plans for making
Pictures
  Selection—suitability to room
  Frames—suitability to picture
Gardens (school garden work)
  Family plots—plan for planting (different vegetables and flowers in each)
  How shall plot be cared for?

Fine Arts

Primary colors (in badges)
  Color harmonies
Geometric forms
  Circle
  Oblong
  Greek cross
Series of lessons on making fashion book
Designing embroideries for trimming clothes (cut paper)
Large family poster for hall—a series of lessons
Tools—drawn on board and modeled in plasticene for sand-table tool house
Designing Christmas post cards, valentines, cards for all holidays
Designing and making tree decorations
Making of wall paper
  Tinting with water color
  Borders for all rooms—stick printing
  Bathroom and kitchen papers—stick printing

Picture study throughout the year—art appreciation
Story illustrations

Physical Education

Placing boxes, sandpapering, nailing, sawing, and many other muscular exercises involved in the project
Various other well-known children's games, such as London Bridge
Ring games
Jack-in-the-box games
Needle and thread games (school-made)
Shoe and stocking games (school-made)
Garden activities
Free play
Pantomime
Races
Marionette dances
Christmas Brownies dance (school-made)
Wood Brownie dance (school-made)
Playing soldier
" Marching " (Stevenson)
No formal drill work

Music

" This is the happy family "
Lullabies
Whole repertoire of Mother Goose songs
Christmas songs
Songs for all other holidays and festive occasions
Songs of all the seasons
Imitations—bird calls, train calls, whistles, horns, etc.
Names of the kindergarten band instruments—blocks, triangles, tambourines, drum, cymbals, piano
Singing in the general assembly
Appreciation—Victrola (Mother Goose, lullabies, etc.)

English

Reading

The Family Book (school-made)
Clytie's garden
Simple Simon
Peanuts
Personnel of the families
Family clubs
Series on making the dolls
Series on body
Tinting the skin
Putting on hair
Series on features
(Christmas work)
A letter from second grade
An answer to this letter
Series on dressing the families
Baa, baa, black sheep
Little Boy Blue
Mary had a little lamb
A conversation
Advertisements of the Model Store
Series on the care of clothes
Series on house building
Series on furnishing
Posters and letters
Well-known readers
Free and Treadwell
Story Hour Readers
Young and Field
Horace Mann Readers

Language

Vocabulary additions
Big—large
Little—small
Middle-sized
Names of parts of body
Names of articles of clothing
Names of parts of each garment
Names of parts of a house
Names of pieces of furniture
Methods of communication
Telling
Writing
Drawing
Acting
Oral reports of club action
Sentence building
In giving directions
In descriptions
Rhyme making
Dramatization
Framing "orders" for the salesman
Note writing
Answer to a note
Making a conversation between two people
Making out the dolls' bills
Development of all lessons (oral composition)
Systematic phonetic work
Systematic word study
Systematic drills
Writing, whenever occasion demanded; this always at board or on large sheets of paper

Stories and Poems

Simple Simon
The three bears
The three goats Gruff
There was an old woman who lived in a shoe
Old Mother Hubbard
Baa, baa, black sheep
Little Boy Blue
Mary had a little lamb
Goody Two-shoes
Cinderella
'Twas the night before Christmas
The little fir tree
This is the house that Jack built
This is the house that the Healys own (school-made)
The carpenter song (school-made)
The Tool Family (school-made)
The wood brownies (school-made)
To market, to market
One, two, three, four, five
Little Jack Horner
I saw three ships come sailing
"To bed, to bed," says Sleepy Head
Stevenson's poems:
e.g., Marching

Arithmetic

Counting up to 32 (the number in the school)
Counting boys, counting girls
Family groups varying in number—3, 5, 8, 4, etc.
Two—mother and father
(1) and (1) are 2
big sister and little sister
(1) and (1) are 2
big brother and little brother
(1) and (1) are 2

Three—mother, father, and baby bear
(1) and (1) and (1) are 3
mother, father, and baby goat
(1) and (1) and (1) are 3
Four—brothers and sisters
(2) and (2) are 4
Five—the number of families in school
Six—mother, father, brothers, sisters
(1) and (1) and (2) and (2) are 6
Seven—age of a few children
Ages—5, 6, 7
Sizes—smaller than, larger than, equal to
Thread length—about 8 inches
Arms and hands and legs and eyes and feet and ears
(2) and (2) and (2) and (2) and (2) and (2) are 12
Counting by 2's up to 12
6 times 2 are 12—the number of beads needed for eyes of one family
Rulers—12 inches, inches and half inches being marked on them
About 4 inches, 3 inches, 2 inches—length of dolls from shoulder to knee
5 cents, or a nickel, for each ruler
1+1+1+1+1=5
Number needing union suits—32
Number of men needing shirts, trousers, coats—14
Number of women needing dresses, petticoats, capes—18
Number of people needing shoes, stockings—32
Pairs—shoes, stockings
"Odd" and "even" numbers—numbering houses on streets
{ 1 cent for 1 inch, 2 cents for 2 inches; etc.
{ 2 cents for 1 inch, 4 cents for 2 inches, 6 cents for 3 inches, etc.
Paying for two things in a store—*e.g.*, 4 cts. for a feather
5 cts. for a ribbon
9 cts.

Bills—making, paying
6 boxes—a puzzle to arrange them in 6 different ways, to form rooms in a house (See pictures of Good Children Street, facing pp. 54 and 55)
Number of windows needed in each house; number of doors
Measuring for doors, windows, surbases, so as to order the lumber
Drawing straight lines on wood, using a ruler
$—introduced through working out the cost of houses
e.g. $6 for lumber
$4 for cement
$10
Buying of rugs, making change—*e.g.*, $3 for the rug, and $5 is given; how much change? (Austrian method)
Measuring windows for curtains
Buying curtain material
Measuring rows in garden, planting the seed
Counting cups, plates, napkins for Mothers' Party
Estimate of amounts in preparing and serving

(b) SKILLS BEGUN

Counting
Measuring { estimating, and testing results with rulers
using rulers to measure each other, dolls, cloth, wood
Adding
Subtracting
Multiplying
Making change (in exceptional cases)
Checking up—calculations, change, measurements
Listening to stories well enough to reproduce them
Learning stories well enough to "play" them
Reading—sentences, phrases, words, stories, advertisements, letters
Recognition of sounds—word building
Sentence building
Story building
Dramatizing
Rhyme building, memorizing jingles

Framing directions for work
Interpreting directions
Writing—words, figures, sentences, letters
Passing materials quickly and economically
Sorting—colors, sizes, etc.
Cutting—stockings, badges, patterns, garments, cardboard, etc.
Use of other tools—brace-and-bit, saw, hammer
Coloring—pictures, badges, wall paper, etc.
Sewing—dolls (features, hair), clothes, curtains, scarfs
Making and using patterns
Dyeing—dolls' skins
Making and trimming hats
Tying bows and knots
Buttoning
Designing—post cards, costumes, wall paper
Illustrating—stories, ideas
Use of crayola
Framing pictures
Arranging—pictures, colors, furniture
Spacing—in all types of work
Molding—plasticene, clay
Pasting without soiling hands, clothes, or paper
Sandpapering—floors, inside trim, furniture
Painting—pictures, bricks, houses, porches
Hoeing, raking, marking rows, planting seeds
Sweeping, dusting
Imitations of a week's activities—all kinds of work represented
Sand-table skills
Paper construction—houses, barns, fences, Christmas tree ornaments
Buying—rulers, materials, shoes, stockings, hat trimmings, hats
Arrangement of tea set on table
Table etiquette
Arranging flowers
Packing lunches

Physical alertness—dances, games
Good posture
Singing
Handling ideas and suggestions along all lines, *e.g.*, Uncle Sam needs the cotton for his soldiers; how shall we stuff our dolls?
Making judgments along all lines, *e.g.*, sizes and best fits of shoes, hats, etc.
Expressing the same ideas in different ways, *e.g.*, saying, writing, drawing, modeling, dramatizing
Initiating new methods or ideas throughout the work, *e.g.*, dipping dolls in tintex to give them a flesh color
Constructive criticism—of child's own work and that of others
"I know how I can do that better"
"Let's take Mary's border because the blocks are so straight"
A review of all skills in preparing for a family reunion

(c) HABITS, ATTITUDES, APPRECIATIONS, IDEALS

Economy and thrift—in making instead of buying ready-made (dolls)
in using materials (cutting stocking to make doll)
in using one material instead of another (corn silk for cotton)
in watching the salesman weigh and count
in checking up one's change
in prompt sending and paying of bills
in proper care of clothing and of tools

Initiative—in determining work for each club
in making and dressing of dolls
in arranging boxes to form rooms of houses
in arranging houses on Good Children Street
in arranging furniture in houses
in making piazzas and porches

Standards established—for selecting play activities
for family behavior—as individuals and as group
for sewing dolls (well enough to hold corn silk filling; strongly enough to keep legs and arms from falling off)
for artistic house construction, coloring, arrangement on street
for inside finish of houses
for proper furnishing of rooms
for good housekeeping, *e.g.*, care of bathroom, proper ventilation, preparing and serving lunches
for personal cleanliness
for receiving and entertaining guests
for politeness (in passing materials, asking and receiving help)
in recognition of letters (answers to second and third grades)
in acknowledging favors done (dolly's "Thank you" note for clothes)
for behavior on trips
for common sense and good taste (*a*) in dress—appropriateness of dress to occasion and weather; (*b*) in furnishings (furniture, rugs, curtains, pictures)
for neatness—in manipulating paste, paints, crayola; in keeping tools, etc., in their proper places
for regularity in daily life—early rising; weekly routine of duties

Standards established—for esthetics of daily life—reading stories, singing, instrumental music
for proper use of leisure—reading stories, talking together politely, playing games
for accuracy—of information (ages); of execution (results of inaccurate measurements; results of failure to follow line in sawing)

Judgments—after weighing values
e.g., in the tryouts for family life
in the recognition of group activity (clubs) as best method of work toward a common end

Coöperation
in fitting boxes together to make houses
responsibility of each for all—club work, family life, duty of each family to contribute to the Christmas party
helping one another—a duty owing to differences in ability
differentiation of duties

Sympathy and love for animals
stories
care of pets in schoolroom

Realization of individual limitations, *e.g.*, inability to make shoes

Patience in learning to do difficult things
boys learning to sew
girls learning to saw

Motive changing attitude toward disagreeable tasks, *e.g.*, boys proud to "sew" the men of the family

Habits of self-criticism and self-drill

Appreciation
of rhythm—the kindergarten band music, as well as their own singing and dancing

Appreciation
of a longer poem—" 'Twas the night before Christmas "
of the Christmas spirit
of the value of tools
of the beauty of pictures
of a puppet show
Realization that beautiful stories and poems may center around prosy, homely subjects
Principle of apportionment—giving of sets of furniture
Reward of special effort—choosing best wall paper
Civic duties—*e.g.*, keeping the room tidy, helping one's neighbors

2. SECOND GRADE MAJOR PROJECT—PLAYING STORE

(a) FACTS TAUGHT

Social Life and Hygiene

Supply and demand—the dominant factor in determining the project " Playing store," a response to needs of first and second grades
Survey of the necessities of home life, to determine the " minimal essentials " of stock for the store
Division of labor in the construction, stocking, and operation of the store
Value of group activity
What is expected of each member?
How shall leaders be selected?
Introduction to simple facts of factory production
Where and how is cloth made? clothing? toys? etc.
How protect from disease workers in the store as well as patrons?
Necessity for cleanliness throughout
Dusting and caring for stock
Ventilation
} Duties carried over into daily school life
Conduct on shopping trips—economy of time, strength, money; courtesy to clerks

How provide food for customers and clerks?—cafeteria
How save paper, food, cotton, to help win the war?
Thanksgiving Day
  Significance of the holiday
  How should the day be spent?
  "How shall we show others what we have learned about Thanksgiving?"
Indian study—growing out of Thanksgiving work and running parallel with the store project throughout the year
  Organization of a tribe
  Names of members
  Detailed study of life—council, etc.
  Assunpink Corn Festival—used as a unit of the pageant

Industrial Arts (Content Side)

[For much of the "doing" side, see SKILLS, page 262]

Articles sold in stores
Kinds of stores
Which kind shall second grade have? Why?
How build the store?
  Possibilities discussed
  Trips downtown for information at first hand
  General plan, in the light of discussion and trip—Victrola boxes
Industries involved
  Brick laying—foundation and chimney
  Cement work—ends of boxes pebble-dashed
  Carpentering—adjusting boxes, making steps, making gable roof, counters, etc.
  Painting and glazing—floors, walls, windows
    Composition of paint
    Use of putty
  Papering—making and hanging border

Departments installed
- Possibilities and needs discussed—principle of demand and supply
- Frequent trips down town
- Departments for supplying food
  - Grocery *
  - Fruits and vegetables—school garden work
  - Cafeteria
- Departments for supplying clothing
  - Dry goods
    - Source and manufacture of fabrics—cotton, wool, silk, linen
    - Arrangement of stock
  - Ready-made clothing
    - Patterns—need, making
    - Selection of materials—review of fabrics
    - Arrangements for display
  - Hats and caps
    - Source and manufacture of materials—raffia, silk, velvet, wire, crinoline, flowers, feathers, stockinette
    - Hat boxes
    - Display of stock
  - Shoes and stockings
    - Study of leather
    - Substitutes for "real" leather, in this case
    - Making boxes
    - Display of stock
  - Notions
    - Names of things ordinarily seen on notion counter
    - Use of each
    - Some brought from home, sorted, and arranged—pins in rows on paper, buttons, etc., on cards

* Little was done with this, but it is a particularly rich field and its possibilities have been partially realized in many schools.

Departments for supplying shelter
  Furniture
    Names of pieces needed for each room of a house
    Type or style—making designs or patterns
    Choice of wood—testing for hardness
    Ordering the wood
    Making and decorating the pieces
    Study of lumber industry—sand-table representation
  Carpet and rugs
    Kinds needed for the various rooms of first-grade houses
    Looms needed for rag rugs—how determine size?
  Curtains and bedding
    Selection by each child of one or the other to be made
    Selection of material, measuring, cutting, making
  Purchase from first grade of corn silk for filling mattresses and pillows (see p. 29)
Miscellaneous departments
  China—Indian pottery
  Art—the best work of the grade in all lines
    Books and stationery
      Number-rhyme books, A B C-jingle books } made for first grade
      Paper, envelopes, pens, pencils
        Source and manufacture of paper
    Indian department—articles made in the playing out of Indian life
    Toys—Christmas work; individual problems
      Different kinds named and studied
Indian arts
  The making of tools, utensils, weapons, costumes, bread and other foods, homes, canoes

Fine Arts

Color studies preliminary to the painting of store, outside and inside
Large letters drawn and cut out for the store sign
Stencil design for border—designed, cut, applied

Dressing the windows (in the store poster)—drawing, coloring, cutting out, and arranging the articles displayed from time to time
Thanksgiving and other post cards
Pictures drawn to illustrate many phases of Indian life
Indian bowls—designed, modeled in clay, and decorated, using the Assunpink motif

Sand-table projects
Indian village, cotton field, sheep farm, flax field, silkworm farm
Fabric booklets—the story of cotton, wool, etc., illustrated with drawings, paintings, and samples
Catalogue of the Model Store
Posters advertising all special sales
Conventional designs for decorating hat boxes
Painting the furniture made
Decorative designs
Art appreciation
Study and criticism of pictures
Illustrations for the school-made stories, and for the number-rhyme and the A B C-jingle books

Physical Education

General physical activity in all phases of the store work
Recreative games at recess
Competitions between the employees of various departments
Dance of the toys
Jack-in-the-box dance
Indian skills—shooting, rowing, running
Indian dances of various kinds, many school-made
Garden activities
Free play
No formal exercises, except for correcting physical defects of structure or action

English

Reading

First readers reviewed (many children far below grade)
Thanksgiving stories
Second readers (five or six used)
Indian books
  Mewanee
  Red Feather
  Hiawatha primer
Advertisements from newspapers and magazines brought to school as the department represented was established
Posters brought to school or seen along the way, including war and thrift posters
Christmas stories
Books brought from home to be searched for stories appropriate to various occasions, or to different phases of the business

Language and Spelling

Oral expression in all phases of school work
Completing a story begun by the teacher
Speech forms
Keeping to the point while selling
Phonetic work stressed since children lacked the power of self-help in reading
Methods of sending orders or other messages—letters, telephone, telegraph, agents, *e.g.*, letters to first grade to announce opening of a department; agent sent to first grade to order corn silk for filling mattresses and pillows
Writing advertisements and posters as successive departments were opened—*e.g.*, hat department
Making out bills
Writing of dates in letters, bills, advertisements of special sales, etc.
Systematic spelling of words added to vocabulary
Rhyme making—in phonetic work; in A B C-jingle and number-rhyme books for first grade
Writing whenever occasion demanded, *e.g.*, practicing the writing of rhymes made, to determine when they might be transcribed in books

Stories and Poems

Thanksgiving, Christmas, and other holiday stories told and retold
Indian myths
Other Indian stories
The story of paint (school-made)
Fabric stories (school-made), *e.g.*, "The cotton baby speaks," "What Johnny heard his woolen coat say," "The silk dress splits at a party," "The linen table-cloth surprises the family at dinner"
Other school-made stories, *e.g.*, "The toys' Christmas party," "The ready-made clothing's ball," "The straw hat and the velvet hat," "The quarrel of the shoe and the stocking," "The notion family goes to a dance," "The carpenters" (a poem)
The elves and the shoemaker
Goody Two-shoes
Cinderella
The honest woman

Music

Fall songs
Thanksgiving songs
Rhythmic exercises—beating to melodies
Indian music—the tom-tom
Indian songs—especially lullabies
  Series of songs used in the inter-grade closing pageant
Indian songs—school-made
Music imitating toys—horns, whistles, rattles, etc.
Imitations of calls—birds; other animals; echoes; engines, approaching and leaving; store calls, "cash girl," "Mr. Smith," "going up"
Christmas songs

Victrola selections—marionette music, etc.
Recognition of melodies
Singing in the general assembly

Arithmetic

Estimating (making comparisons, developing judgments)
- Position of Victrola boxes to utilize all space available
- Dimensions of box to make small second-floor department
- Number of bricks necessary for a foundation
  - Form of space drawn on board (oblong)
  - Form of brick drawn on board (oblong)
- Size of chimney in order to be in proportion to size of store
- Number of bricks necessary for chimney (square)
- Quantity of cement needed for filling in ends of boxes, brick laying, etc.
- Cost of counters
- Cost of painting and papering in the store
- Prices of all articles made for sale
  - Consideration of materials, time, skill
- Amounts of things to be ordered for the store

Counting (for various needs, frequently to verify earlier estimates)
- Children in grade, for distributing materials, etc.; 1 to 25, by 2's, by 5's, etc.
- Children in first grade (customers) 1 to 32, by 6's (number in each family)
- Number of departments needed in store
- Number of bricks in foundation—$21 = 7, 7, 7$
- Inches, feet (counting on rulers and yardsticks)
- Pounds, ounces (weighing cement and sand for construction work; $16 + 1$; $16 + 2$; etc.
- Articles put on sale / Articles sold } Foundation for subtraction
- Money in cash box; pennies, nickels, dimes, quarters, halves
- Scores (in games) counting by 2's, 3's, 4's

Taking account of stock
Seeds for each row in garden plot, *e.g.*, 9 tomato seeds
$9 + 9$, or 2×9, in two rows, etc.
Seeds for each garden
Measuring (for various needs, frequently to check up estimates)
Victrola boxes—length, width, depth
Various boxes—to find one of proper dimensions to make small second-floor department
Foundation space to be filled in with bricks
Bricks { length, width, thickness
finding mid-point for brick laying
Surfaces to be painted and papered
Windows—size, space between
Doors—size, space on each side
Wood—for steps, counters, furniture
Roof—for tar paper
Rooms in first-grade houses—to get size of rug looms
½-inch spaces on loom frames, for placing nails
Cardboard to make rulers—inches and half-inches marked
to make containers; tags; bolts on which to wrap fabrics
All fabrics (dry goods, ribbon, etc.) before, at time of, and after sales
Windows—for curtains
Beds—for mattresses
Materials—for garments, curtains, mattresses
Garden—plots, rows, spaces between seeds, etc.
Ordering materials needed (English work as well as arithmetic)
Victrola boxes (number and size given—4
each 5 ft. $\times$ 2 ft. $\times$ 2 ft.)
Bricks—21 for foundation
10 for chimney
31
Sand (lbs., oz.) } proportion
Cement (lbs., oz.) }
Glass for windows—8 sheets, each 8 in. $\times$ 8 in.
Putty—about 4 oz. for each window ($8 \times 4 = 32$)

Tar paper
Wood for steps—3 steps, each needing 28 inches of 4-inch board ($3 \times 28 = 84$; discovery of need for carrying)
for counters—2 for each room, 4 rooms
$4 \times 2 = 8$
each counter 4 inches long
$8 \times 4 = 32$
for furniture for 6 rooms
for toys
Clay for toys
Clothing materials
Hat boxes, *e.g.*, 2 doz. ($2 \times 12 = 24$)
Hat materials, *e.g.*, ½ doz. feathers
3 doz. sprays of flowers
3 yds. of ribbon
Shoe materials

Arranging materials—sorting, spacing; division
Victrola boxes—4 in 2 tiers ($4 \div 2 = 2$)
Bricks for foundation—$21 \div 3 = 7$; 14 front; 2 rows
$14 \div 2 = 7$
Bricks for chimney (to form hollow square, in 3 tiers)
$12 \div 3 = 4$ in each tier
Windows—8 panes—3 in each room on 2d floor
$2 \times 3 = 6$
1 in each room on 1st floor
$2 \times 1 = 2$
Doors—4, interior
1, on street
Counters—8 made for 4 rooms
$8 \div 4 = 2$ for each room
Shoes in boxes—30 pairs = 60 shoes
$60 \div 2 = 30$
Pins in papers—2 rows; 12 in each
Buttons on cards—4 rows; 6 in each
Toys in boxes—*e.g.*, 12 blocks in box
Materials on counters
Window displays

Finding cost—of building materials and stock
- Boxes—4 at 75 cents
  1 at 5 cents
- Bricks—31 at 2 cents
- Cement—20 lbs. at 3 cents
- Glass—8 panes at 6 cents
- Tar paper—75 cents for a remnant
- Lumber (scraps from manual training department); cost was estimated and guessed
- Dry goods and notions—donations from homes, friends, domestic science department
- Telegrams, *e.g.*, 3 cents a word

Bill making (for construction, stocking the store, and sales)
- Carpenter's bill
- Brick mason's bill
- Painter's and paper-hanger's bills
- Dry goods bills
- Furniture bills, etc.

Special sales (making change emphasized)
- Rulers—? cents apiece (according to quality of workmanship on them)
- Toys—various prices
- Dry goods—? cents per inch
- Ready-made clothing—$-mark introduced and used
- Hats—various prices
- Shoes and stockings—? per pair
- Notions—? per dozen; 3 for 5 cents;
  ? for each;
  ? per box;
  ? per ball;
  ? per yard.
- Furniture (*given* to first grade)
- Rugs—various prices, according to material and workmanship
- China—(children bought their own bowls to take home at end of year)

Garden produce (actual market prices for beets, beans, carrots, lettuce, to Normal School lunch room)
? per bunch of 6; ? per box; ? per head
Cafeteria lunches (children found cost of food at restaurants in order to determine prices)
Telling time
Opening and closing of store
Special sales at certain hours
Special sales on certain days
Figure writing
On advertisements
On tags
On bills
On sales slips
In solving problems
In drills
In scoring
Fundamental operations
Addition, Subtraction, Multiplication, Division } All shown above
Drill—constantly given in all of the processes listed, either through frequent need and use of the same process, *e.g.*, in making change at sales; or by special exercises, after discovering a need to the children through an actual situation. Motivation was inherent in this situation; *e.g.*, discovering salesmen, store games, lunching at the cafeteria, the making of number-rhyme books for first grade, etc.

(b) SKILLS BEGUN OR CONTINUED

Counting, Measuring, Adding, Subtracting, Multiplying, Dividing } in the daily life of the store

Recalling past experiences—*e.g.*, trips to stores
Carrying on conversations
  Clerk and customer, "drummer" and merchant
  General discussion of projects
  Telephoning
  Indian councils
Making sales
Putting facts concisely—telegrams, advertisements
Reading—oral, silent
Story building
Story telling
Dramatizing
Rhyming words (phonetics)
Rhyme building
Beating time to poems
Memorizing poems
Making simple tunes
Enlarging vocabulary by categories, *e.g.*, furniture words, notion-counter words
Associating words with things
Spelling
Writing—letters, orders, etc.
Use of capitals, punctuation, paragraphing
Sorting—kinds of fabrics, pins, buttons, etc.
Measuring (see Facts—Arithmetic, p. 259)
Spacing
Cutting—patterns, garments, mattresses, pillows, curtains, tar paper, cardboard, etc.
Sewing carpet rags
Weaving rugs
Braiding (raffia) and sewing braid to form a spiral
Sewing and fitting—garments, kid-glove shoes, mattresses, etc.
Sawing and nailing—windows, steps, gable roof, counters, looms, furniture
Sandpapering
Painting—floors, furniture, etc.
Laying bricks

Mixing and applying cement
Puttying glass in windows
Designing and cutting stencils
Making and trimming hats
  Tying bows and knots
Making hat boxes
Making wooden racks for displaying garments
Making toys (involving many skills)
Applying design—wall-paper border, hat boxes, furniture
  Use of crayola and paint
Blending or combining colors
Illustrating stories
Digging, planting, hoeing, etc.
Making Indian bread—shelling the corn, pounding, mixing, baking
Making Indian weapons and implements
Clay work—bowls, marbles, toy dishes
Singing
Dancing
Originating Indian and other dances
Handling ideas and suggestions along all lines; *e.g.,* the suggestion, "How would a silk stocking feel if worn for a long tramp in the country?" brought forth the story told on p. 89
Making judgments along all lines; *e.g.,* measuring rooms in first-grade houses to decide how large to make the furniture for them
Expressing same idea in different ways; *e.g.,* use of the Assunpink motif in different designs submitted for decorating the Indian bowls
Initiating new methods or ideas throughout the work; *e.g.,* child's suggestion that the border made to go around the top of the walls be used instead around windows to hide grease spots
Constructive criticism of child's own work and that of others; *e.g.,* "I must make another number-rhyme book. No one will pay for one so dirty as this." "I believe John's is worth a quarter."

(c) HABITS, ATTITUDES, IDEALS, APPRECIATIONS

Accuracy { in counting, making change, etc.
in checking up results
Distinct speech
Good speech forms
Politeness in treatment of customers, etc.
Helping those who need or seek help
Fairness in dealing with people
Classification of miscellaneous articles (in stocking the various departments)
Catering to customers' needs and tastes, in planning business
Economy in the use of fabrics, wood, cement, etc.
Economy in the purchase of foods at cafeteria
Ingenuity in meeting emergencies—*e.g.*, oil stains on wall from putty
Selection of wholesome food
Making food look attractive } Cafeteria, Mothers' Party
Forming judgments—
As to size and materials
As to best stores in which to make certain purchases
Getting first-hand information whenever possible
Using real materials whenever possible
Self-criticism, as well as kindly criticism of others
Self-help, especially in reading
Self-setting of standards of attainment, especially in self-initiated work
Perseverance in attaining these standards
Keeping products up to standard, especially if they are to be used as models
Responsibility of leaders for keeping group work up to specifications
Standards for dressing
Selection of feathers for hats—the Audubon Society
Appropriateness of shoes, etc., to the occasion
Good taste in furniture
Establishing standards by the group, for selecting the best work in the group

Establishing standards for good salesmen, managers, shoppers (The survival of the fittest)
Ambition to excel—
In order to become a salesman or manager
In order to improve one's record
Appreciation—
Of color harmonies (booklets)
Of processes behind a finished article; *e.g.,* toys, garments
Of lives of other people
Of the progress of civilization

2. Third Grade Major Project—Playing City

(a) facts taught

Social Life (History) and Hygiene

Functions of a city in the lives of individuals
Protection against disease, fire, and evil-minded people
Individual's obligation to the city
Organization of a civic life in the school
Streets (aisles)
Departments—Police, Fire, Health, Finance, Public Buildings, Public Affairs, Street Cleaning
Specific duties of each
Ways and means of running each
Election of officers
Coöperation
Development of city clubs
Appointment of a city nurse—her duties
Acquaintance with first-aid supplies and methods
Meaning of a representative government—decision by voting, as the voice of the people
Building of the play city
Causes of diseases in a city—*e.g.,* necessity for cleaning the canals
Need for canals in city of Trenton
Uses made of river and creek
Necessity for good roads
History of the trail

Bridge building
  Need for
  History of
Home building
  Homes of to-day contrasted with pictures of homes of the past
Evolution of homes from primitive times
Life in the play city
Local government—need for
Commission type of city organization
  More detailed study of each department than in the organization of the school city
City, county, and state governments contrasted
Civic work represented by other public buildings—post office, railroad stations, reservoir, power house, garbage crematory, public library, State Normal School, city schools, banks, hotels, churches, theaters, armory, hospitals
Going into business
  Victory City Times
    Organization of staff
  Pottery business
    Part played by this industry in Trenton
  Furniture making
  Candy making—sanitary and hygienic aspects
Recreation spots out-of-doors
  Park
  Public gardens (represented by the school garden)
Local history (introduced by the study of monuments in city and park)
  Part played by Trenton in the Revolution
Study of primitive life—beginning with the making of the play city, and running parallel with the city project throughout the year. Book I of Wells' series "How the Present Came from the Past" used as a text
Closing inter-grade pageant—"managed" by third grade, who presented the play suggested in the "Can you?" sections of the text

Industrial Arts (Content Side)

[For much of the "doing" side, see SKILLS, page 276]

Organizing the school city
- Badges for the officers
- Signposts for the streets
- Books (school-made) for the library

Building the play city
- Making map of Trenton—plan of the play city
- The site
  - Making the floor waterproof
  - Transferring plan to floor
  - Filling in the space with earth
  - Grading the site

Making canals, river, and creek
- Trips to see each
- Uses
- Method of making
- Making boxes for mixing the cement

Road building
- Kinds needed in a miniature Trenton
  - Trips to see all these kinds
- Study of kinds seen—dirt, gravel, macadam, wood block, cobble, cement, asphalt
  - Review of the composition of cement
- Sand-table samples of each
- Actual building of the play-city streets

Bridge building
- Fixed bridges
  - Wooden
  - Steel
  - Concrete—making the molds for these, an introduction to the use of concrete
- Drawbridges

Park making
- Laying out the site
- Making and placing the monuments
- Making and placing the zoo

School-garden work
  Planning, digging, planting, caring for crops
  Harvesting
  Selling products to Normal School lunch room
Building the homes of the play city
  Study of homes in Trenton—general form, size, material
  Detailed study by child of his own home
    Materials used
    General form
      Placing of windows, doors, chimney, porches
    Making plan
    Building each house according to its plan
  Sand-table work, showing evolution of early houses
      (Pictures in *National Geographic Magazine*)
    Materials used
    Kinds of roofs, etc.
  Sand-table story of Robinson Crusoe
  Brick making and laying
  Painting of homes
  Lawns and walks, if necessary
Erection of public buildings
  Review of brick making, concrete work, etc.
Trip to printing establishment
  "Printing" the Victory City Times
Pottery industry
  Trip to see Beleek ware in the making
  Making a tea set for first-grade families
  Study of clay and pottery centers in New Jersey
  Study of large pottery areas in the United States
Lumber industry
  Plan for making a set of chairs
  Selection of lumber after a study of kinds, as to hardness, finish, etc.
  Making chairs, using screw construction
  Mapping chief lumber centers of the United States
  A lumber camp on the sand table
The candy industry
  Study of economical recipes
  Making sugarless candy

Preparation of lemonade and cookies for Mothers' Party
Making costumes and properties of all sorts for pageant

Fine Arts

Designing and coloring badges for city officers
The city poster
  Study of form of buildings
  Measuring of buildings
  Color combinations
  Paper cutting and pasting technic
The city calendar—each sheet suggestive of activities of the month
  Crayola work
  Water color (brush work)
  Cut paper designs
  Letters, printed and cut
  Figures
Decorating the books for the city library
  Stick designing and printing
A city symbol—designed, cut on linoleum, and used in newspaper heading
Pictures of houses—brought by children; found in Trenton library
  Beautiful exteriors, proportions, color
Illustrations } drawn for the Victory City Times
Cartoons }
Designing post cards for various occasions (including valentines)
Designing dishes for tea set
  Decoration for dishes
  Color scheme for decoration
Designing chairs
Decorating paper cups, plates, napkins—for Mothers' Party
Making scenery for play—very large
  Separate tree studies—small; then larger copies
  Animal studies
  Bird studies
  Woods, with birds and other animals

Designing and decorating costumes for inter-grade play
Decorating large bowls (mortars) for use in play
Motifs suggested by pictures of primitive pottery
Decorating message sticks, and "marking" stones for the play

Physical Education

Digging, shoveling, and carrying soil for the city site
Carrying, mixing, using cement
Sawing, carrying, nailing lumber for canals, chairs, etc.
Building activities
Garden activities
Games—inter-street contests of various kinds
Free play
Folk dances
Primitive dances
War dance
Fire dance
Other ceremonial dances
Primitive initiation tests and games
No formal exercises, except for corrective purposes

Music

Primitive calls
Danger signals, calls of the hunt, calls of the clan, war cries, calls of rejoicing
Street noises (imitations)
Birds, train, bells, factory whistles, fire engines, braying of mules, calls of hucksters, junk dealers, etc.
A city band—vocal imitations of instruments
Community songs for occasions
Making Victory City Song—one stanza by each street
Composing song for Mothers' Party ("candy" poem set to music)
Composing a primitive lullaby for the pageant
Singing in the general assembly
Appreciation—Victrola (selected songs and orchestra numbers)

English

Reading

- Selections from a number of third readers
- Three reading clubs organised
  - Chairman for each piece of work
  - Silent reading encouraged
  - Stories selected from "City" library (See Appendix, p. 320)
  - Books brought by children from home
  - Historical matter
    - Dopp books
    - Wells books
  - Local newspapers
    - Current history (in the wide sense)
  - Stories for the holidays and special occasions
- Recipes
  - Brought from home
  - Cut from magazines and newspapers
- Three types of reading
  - Informational
    - City guide books
    - Geographical readers
    - Home geographies
    - National Geographic Magazine
    - The Book of Knowledge
  - For one's own pleasure
  - For giving information and pleasure to others

Language and Spelling

- Naming the city
- Naming the school-city streets
- Writing Victory City poem (later set to music)
- Discussion of departments organized
- Keeping records of each department
- Oral and written report to other grades of department action
- Requests for family (1st grade) and store (2d grade) coöperation
- Completing story begun by teacher
- Filling the "school-made" books for library
  - History of Victory City
  - Original stories
  - Trips
  - Poems learned
  - Original verses
  - Jokes
  - Public health work
  - Other department records
  - Report on each public building erected
  - The Primitive Play
- Speeches (arguments for the erection of each public building; presentation of tea set, etc.)
- Newspaper articles of all sorts
- Note writing
  - A request for help
  - Thanks for this help
- Ordering lumber for canals, etc.
- Ordering cement for river and creek
- Descriptions of homes (oral)
- Constructing The Primitive Play, as history work progressed
- Dramatizing stories, *e.g.*, Robinson Crusoe, as moving pictures; writing legend for each picture
- Speech forms
- Accurate reports of experiences and of facts read
- Writing—bills, recipes for candy, invitations to Mothers' Party, the content of books for the city library, etc.
- Making a "candy" poem
- Arranging for the pageant as summary of the year's work

Stories and Poems

- Primitive myths
- Some Greek myths
- Kipling stories
- Robinson Crusoe
- Alice in Wonderland
- Poems appropriate to season or special occasion
- Field's "Gingham dog and calico cat," etc.
- Stevenson's poems
- Review of second-grade work, with additions
- Miscellaneous short stories

Arithmetic

Estimating, counting, measuring, weighing, ordering materials

Size of Trenton—number of inhabitants; area (approximately an oblong)

Length, Width } of the oblong maps

"Longer than wide." Width goes into length ? times

Proportion of oblong

How many oblongs the size of paper map can be placed in the oblong of oilcloth for wall map? (6)

How many oblongs of the wall map size can be placed in the large oblong city-space on floor? (8)

Filling in of floor map of play city with earth, at least eight inches deep

Determining number and size of sign posts for school city—for play city

Measuring wood for these two sets of sign posts

Measuring width of rivers, creeks, canals, to determine length of bridges

Determining amount of lumber to be ordered for canals, bridges, chairs

Measuring lengths of lumber for the construction work

Determining amount of cement used for roads, river, creek

Weighing amount used per foot of each construction, to calculate cost

Measuring length of streets, rivers, creek

Ordering materials for these constructions

Number of lbs. of cement at ? per lb.

Number of lbs. of asphalt at ? per lb.

Number of loads (boxes) of stone at ? per load

Studying approximate proportions of homes and public buildings in Trenton

Measuring and placing of windows, doors, and porches
Determining length and position of new streets as needed
Estimating number of library cards from one sheet of cardboard
  Measuring and ruling cards
Library business (records of circulation; fines)
Number of streets (aisles) in the school city
Number of inhabitants on each street
Number of inhabitants in the city
} Addition, Multiplication
Ordering grass seed for park in play city
Planning and measuring school garden
  Buying seeds
The town clock—review of second-grade work in telling time

The city calendar

Days	*Weeks*	*Months*
7	4, + 0 days	12
28 or 29	4, + 1 day	
30	4, + 2 days	
31	4, + 3 days	
365 or 366	52	

Post office business
  Buying stamps
  Registering letters
  Special delivery letters
  Sending parcel post packages (weighing)
Selling theater tickets, produce of school garden, Thrift Stamp Jingle Books, etc.
Buying railroad tickets
City department of finance—care of money from drives, sales, etc., involving the four fundamental operations
Simple banking—sufficient to transact the city business

Calculation of costs—
  Of refreshments for Mothers' Party—candy, lemonade, cookies
  Of tea set made for first grade
  Of making one chair—the whole set (lumber and labor)
  Of each piece of city construction work—filling in site, building roads, river, canals, bridges, homes, public buildings
Paying of all public bills from the city treasury
Drills in estimating, measuring, adding, subtracting, multiplying, dividing, as needs became manifest

Nature Study and Elementary Geography

Map drawing
  Indicating directions
  Methods of showing rivers, canals, streets, etc.
  Study of "real" map for comparison
Use of outline maps
  Indicating clay centers in New Jersey
  Indicating clay centers in the United States
  Indicating lumber centers in the United States
Soil study with view to selection of material for the city site
Study of configuration of land in and about Trenton
  Slopes and hills
    Term "grading" introduced
  Rivers, creeks, and canals
    Differences
    Uses—drainage, transportation
    Trips to see different forms—geographical aspect emphasized
    Introduction to different kinds of cement, especially waterproof
      Origin
      Characteristics
    Evaporation—need for refilling river and canal in play city

Capillary attraction
"Up stream" } illustrated in slopes of canal
"Down stream" } and river
Trips to see different kinds of roads
Careful study of relative length and direction
Necessity for a "crown" in construction
The drawbridge—as illustrating the pulley
Location of some famous bridges (pictures of bridges shown)
Value and origin of city parks
Trips to Cadwalader Park—plan studied
Grass seed, studied, planted, cared for
Study of flowers and vegetables
Fixing exact location of children's homes for the play city
A review of directions and location
Addition of more streets to map, as well as city
Indicating houses on map
Trenton
The capital of the state of New Jersey
The county seat of Mercer
Railroads into and out of Trenton
Map study
Imaginary journeys to large cities, of interest to children
Placing clay and pottery centers on map
Tree study
On campus
Along streets
In parks
Other trees from specimen or picture
Forestry laws
Arbor Day tree planting in Victory City (willow twigs, rooted in water)

(b) SKILLS BEGUN OR CONTINUED

Arithmetical calculations
In making out and paying bills for construction
e.g., the cost of paving State Street

In transacting city business
e.g., Post office—adding, subtracting, multiplying, dividing, weighing
In selling garden produce to lunch room
Oral expression
Discussion of developing projects
Argument by each child for the existence of the public building which he had chosen to erect
Working out the play suggested in their primitive history text
Reading—oral, silent
Pantomime as means of proving success in silent reading
Word study
Dramatizing—"Ulysses and the bag of winds," in the study of points of the compass
Writing (neatly and accurately)
Records of city department work
Other books for city library
Notes or brief letters
Orders for materials, etc.
Newspaper articles, etc.
Composition—as in preceding item; narrative, descriptive, dialogue
Original poems, *e.g.*, Thrift Stamp jingles
Spelling, as involved in all of the above
Measuring, sawing, nailing; *e.g.*, street signposts
Using brace-and-bit, plane, screws, T-square; *e.g.*, in making set of chairs
Making water-tight joints; *e.g.*, canal-troughs
Handling cement—Portland and waterproof; *e.g.*, river-bed, concrete bridge, streets
Making roads of various types
Making bridges
Mechano-toy construction
Brick making and laying
Painting houses
Modeling in clay; *e.g.*, statues
Crayola technic; *e.g.*, scenery for the play

Stick printing; *e.g.,* decorating book covers
Making cut and torn paper pictures
Making maps or plans
  Locating directions
    North, south, etc.
    Northeast, southeast, etc.
Digging, hoeing, raking, planting, weeding, in garden
Making candy
  Preparing worker and material—cleanliness
  Use of meat-grinder
Singing
Making music to fit poems
Dancing
Handling ideas and suggestions along all lines; *e.g.,* "This sand table has been disturbed again" (during the lunch hour). "Let's notify the police department" (of the school city)
Making judgments along all lines; *e.g.,* To establish relative size of homes and public buildings, children were asked, "How many homes like yours would go into the post office?"
Expressing same idea in different ways; *e.g.,* The story of Robinson Crusoe was told, written in one of the library books, dramatized, shown in moving pictures, and worked out on the sand table
Initiating new methods or ideas throughout the work; *e.g.,* Suggestions for making the canal so that it would hold "real" water
Constructive criticism; *e.g.,* One child to another, "Your bricks won't make a good wall because they are so uneven. See how these straight ones stick together."

(c) HABITS, ATTITUDES, APPRECIATIONS, IDEALS

Economy
  In making and maintaining a garden
  In ordering and using materials; *e.g.,* wood, clay
    Methods of avoiding waste of materials

In making rather than buying; *e.g.*, chairs
In cooking; *e.g.*, sugarless candy
In making the most of the materials at hand
In careful expenditure of money

Accuracy in constructive activities
Proper proportions of cement, sand, and water for street building
In determining quantities to be ordered
In observing and describing public buildings, monuments, etc.

Initiative
In organizing the school city
In constructive activities in building the play city
In planning for various holiday events
In developing the pageant—etc.

Self-dependence
In solving problems or meeting emergencies; *e.g.*, the correct placing in play city of child's home street
Earning money for one's own pleasure and to give pleasure to others; *e.g.*, selling garden produce to finance Mothers' Party

Appreciation
Of the help rendered by others
Habit of expressing gratitude
Of the work involved in making a book, leading to respect for books and careful handling of them
Of the property rights of others leading to respect of these rights
Of the value of hard work, growing out of working hard to accomplish a much desired end

Standards established
Of conduct for living together in cities. Only a few general rules laid down at first; others added as need arose
Of cleanliness—both individual and group—especially in cooking
Of helpfulness and patience in club work and other group activities

- Of good taste
  - In china decoration
  - In furniture
  - In homes (exterior)
  - In literature
- Of efficiency in reading a story before attempting to share it

Specific health habits and ideals; *e.g.*, personal and group cleanliness

Specific civic habits and ideals

- Wholesome competition for certain civic honors
- Pride in making and maintaining a park
- Pride in the beauty of one's city—attractive houses, graceful as well as strong bridges, well-paved streets, etc.
- Recognition of merit in an individual citizen or a neighborhood group; *e.g.*, the award of the V. C. banner to the boy who designed and made the drawbridge; to the street in which for a whole week no books were overdue at the library

Ideals of democracy

Satisfaction with group approval as a reward of effort

Amending one's ways in consequence of group disapproval

APPENDIX

CONTENTS OF "THE FAMILY BOOK"

1. CLYTIE'S GARDEN

This is Clytie's garden.
It has a house in it.
It has flowers in it.
Clytie was a naughty girl.
She disobeyed her mother.
So she was changed into a sunflower.

2. SIMPLE SIMON

Simple Simon met a pie-man
Going to the fair.
Said Simple Simon to the pie-man
"Let me taste your ware."

Said the pie-man to Simple Simon,
"Show me first your penny."
Said Simple Simon to the pie-man,
"Indeed, I have not any."

3. PEANUTS

Peanuts! peanuts!
Five cents a bag!
Who wants to buy?
Who wants to buy?
Buy them now!

PERSONNEL OF THE FAMILIES

4. THE HEALY FAMILY

Marian is the mother.
Junior is the father.
Sylvia is the big sister.
David is the big brother.
Elizabeth is the little sister.
Albert is the little brother.

5. THE MORRIS FAMILY

Katherine is the mother.
Theodore is the father.
Helen is the big sister.
Eugene is the big brother.
Ethel is the little sister.
John is the little brother.

6. THE KROSNICK FAMILY

Frances is the mother.
Harry is the father.
Splendora is the big sister.
Robert is the big brother.
Irene is the little sister.
Charles is the little brother.

7. THE BRADSTON FAMILY

Margaret is the mother.
Joseph is the father.
Hannah is the big sister.
Frank is the big brother.
Elsie is the little sister.
Evelyn is the aunt.
Rose is the grandmother.

8. THE HORN FAMILY

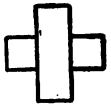
Alice is the mother.
John is the father.
Mary is the big sister.
Daniel is the big brother.
Elizabeth is the little sister.
Richard is the little brother.
Elsie is the grandmother.

9. FAMILY CLUBS

Fathers' Club
Colors:—blue and orange
Here is their badge:—

Mothers' Club
Colors:—yellow and purple
Here is their badge:—

Helpers' Club
Colors:—red and green
Here is their badge:—



MAKING THE PLAY FAMILIES

NOTE.—Dolls were made from small stockings.

10. DOLLY'S HEAD

Cut the foot from the leg.
Stuff the toe with corn silk.
This will make the head.
Tie it with string.
This will make the neck.

11. DOLLY'S BODY

Stuff the rest of the foot with corn silk.
Sew it shut.
This will make the body.

12. DOLLY'S LEGS AND ARMS

Cut the leg in half lengthwise.
Cut each piece in half crosswise.
Fold each piece in half lengthwise.
Sew up the side and one end of each piece.
Stuff each piece with corn silk.
This will make the arms and legs.

13. DOLLY'S FEET AND HANDS

Tie a string around the end of each leg.
This will make the feet.
Tie a string around the end of each arm.
This will make the hands.
Sew the legs and the arms to the body.

14. DOLLY'S SKIN

My skin is pink.
Dolly's skin is white.
I want to make dolly's skin pink.
This powder is pink.
I'll put the powder into some water.
Then I'll dip dolly in the pink water.
See how pretty her skin is now!

15. DOLLY'S HAIR

Oh, what shall I do?
My dolly needs hair.
I'll save my own combings,
And with her I'll share.

With soap and hot water,
I'll wash hair with care.
Then on her head sew it.
Hurrah for the hair!

16. DOLLY'S NOSE

Oh! give me a nose,
For—don't you see?—
I want to smell
That Christmas tree.

17. DOLLY'S MOUTH

Dear First Grade,
A mouth I need
To tell you things,
And to eat the candy
Which Santa brings.
Dolly.

18. DOLLY'S EYES

Dear First Grade,
May I have eyes,
So I may see
All the nice things
Santa has for me?
Dolly.

19. DOLLY'S EARS

Dear First Grade,
I must hear all the songs
Of Christmas so dear,
So on each side of my head
Please put a pink ear.
Dolly.

DRESSING THE DOLL FAMILIES

20. DOLLY'S CLOTHES

"Some clothes! some clothes!
For we are cold,"
The dollies now all cry.
"How can we get them,
Can you tell?"
"We'll make them, or we'll buy."

21. A LETTER

Dear First Grade,
Come to our store to buy.
We are ready now to sell.
We are selling dry goods.
We can dress every one in your family.
We have fine bargains.
Second Grade.

22. AN ANSWER

Dear Second Grade,
Thank you. We will come.
First Grade.

23. DOLLY'S UNION SUIT

We have made a union suit for dolly.
First we measured dolly.
Then we made a pattern.
We measured the pattern.
We bought woolen goods in the second grade.
We put the pattern on the goods.
We put pins in it.
Then we cut around the pattern.
We sewed up the seams.
Then we put the suit on dolly.
Now she is warm.

24. PETTICOATS

Mothers and sisters now must have
Fine petticoats so new;
Please, Mr. Store-man, sell to me
Muslin white and flannel blue.

25. SHIRTS

Now fathers dear, and brothers, too,
New shirts must surely buy.
So, Mr. Store-man, sell me goods
At prices not too high.

26. BAA, BAA, BLACK SHEEP

Baa, baa, black sheep,
Have you any wool?
Yes, sir; yes, sir,
Three bags full.
One for my master,
One for my dame,
And one for the little boy
That lives down the lane.

27. LITTLE BOY BLUE

Little Boy Blue, come blow your horn,
The sheep are in the meadow,
The cows are in the corn.
Where is the little boy that watches the sheep?
He's under the hay stack, fast asleep.

28. MARY HAD A LITTLE LAMB

Mary had a little lamb,
Its fleece was white as snow,
And everywhere that Mary went,
The lamb was sure to go.

29. MOTHER'S CLOTHES

Mother must have a pretty gown,
And don't forget her bonnet.
A cape of red, or blue, or brown,
With ribbons bright upon it.

30. FATHER'S CLOTHES

Father must have wool trousers new,
And don't forget his belt,
A good warm coat, a tie of blue,
A soft hat made of felt.

31. THE MAKING OF MOTHER'S DRESS

First we measure mother.
Her dress must be 4 inches long.
Her sleeves must be 2 inches long.
This is our pattern.
This is our goods.
I must pin the pattern on the goods.
Now I will cut around it.
See, it is ready to be sewed.
First, I sew up the sides.
Then I'll baste the hem.
Now see my pretty little stitches.

32. A "THANK YOU" LETTER

Dear First Grade,

I want to thank you for the pretty dress. I wore it to a Valentine party. We had ice cream and candy at the party.

Dolly.

33. SHOES AND STOCKINGS

Our pink toes are cold,
And we are too old
Not to wear stockings and shoes.
So father and mother, sisters and brothers,
From these ads please help us to choose.

34. A CONVERSATION

Big brother says, "Please, mother dear, give me a pair of stockings and a pair of shoes. When can I have them?"

Mother says, "You shall have shoes or stockings. First Grade will make them. You will have them by Friday, perhaps."

BUILDING HOUSES FOR THE DOLL FAMILIES

35. WAITING FOR HOMES

Oh, see our dolls all dressed so fine,
Upon our desks they stand.
They're waiting now for you and me
To build their houses grand.

"How shall we build them?" father asks.
"How large shall these homes be?
Since in the families there are six,
Shall we now on six rooms agree?"

36. SITTING ROOM AND DINING ROOM

Our homes must have a sitting room
Where we our friends may meet,
And next to it a dining room
Where we our meals shall eat.

37. KITCHEN

The busiest spot in all the house
You probably can tell,—
The kitchen, with its pots and pans,
Where mother cooks so well.

38. BATHROOM

If you should wish to wash your hands,
Or take a good cold plunge,
You'll find upon the bathroom racks
Your towels, soap, and sponge.

39. BEDROOMS

And when your busy day is done,
The bed, with smooth, white arms,
Is waiting for you, clean and neat,
To keep you from all harms.

40. THE ATTIC

Up underneath the roof you'll find
The attic where we play.
It's there we love to run and jump
On every rainy day.

41. THIS IS THE HOUSE THAT THE HEALYS OWN

This is the house that the Healys own.
This is the carpenter that built the house that the Healys own.
This is the wood that the carpenter used to build the house that the Healys own.
This is the pencil that marked the wood that the carpenter used, etc.
This is the ruler that helped the pencil that marked the wood, etc.
This is the line that was helped by the ruler that helped the pencil, etc.
This is the saw that sawed the line that was helped by the ruler that helped the pencil, etc.
This is the door that the saw cut out when it sawed the line, etc.
This is the nail that nailed the door that the saw cut out, etc.
This is the hammer that drove in the nail that nailed the door, etc.

42. A LETTER TO A FORMER STUDENT TEACHER

Dear Miss ———,

We have made the windows.
We have made the doors.
We have made frames on the windows on the outside.
On the inside of the windows we have made frames, too.

We have made frames on the doors on the outside.
On the inside of the doors we have made frames, too.

Kathryn
Splendora
Albert
David

(NOTE.—These four children worked especially hard in building up this lesson, and so had the honor of signing the letter.)

43. GETTING PAINT

How can we make the floors look prettier?
How can we make the doors look prettier?
We must paint them.
How can we get the paint?
Let us ask Mr. Clark for it.

Dear Mr. Clark,

Please give us some paint to paint the floors, the window and door frames, and the surbases of our houses. Thank you.

First Grade.

44. PAINTERS' SONG

Painters now are we,
Merrily we sing.
Busy brushes flying,
Over, back; up and down.
Every one is trying.

45. PAPERERS' SONG

Paperers now are we,
Merrily we sing.
Busy scissors flying.
Cut it here; trim it there.
Every one is trying.

46. THE BRICK'S STORY

"Take me," says a brick.
"I lived in the earth.
When I was soft clay,
Men dug me out.
They put me into molds to make me straight.
Then they put me into a hot fire.
The fire baked me and made me strong and hard.
Now I am ready for your house."

47. THE STONE'S STORY

"Take me," says the stone.
"I lived in the earth.
I was part of a big, big rock.
Men put gunpowder into the rock.
They lighted it.
It exploded.
This broke the rock into pieces.
I was one of those pieces.
I rolled down the hill.
Now I am ready for your house."

48. THE CEMENT'S STORY

"Take me," says the cement.
"I, too, lived in the earth.
I am made of certain kinds of rock.
These rocks were ground into powder.
One kind of rock had lime in it.
It is the lime in me which makes me stick.
It is the lime in me which makes me hard.
I make fine houses.
Please take me."

49. THE BOARD'S STORY

"Take me," says the wood.
"I lived in the forest.
I was one of those large, large trees.
Men chopped me down.
They carried me to the saw mill.
There I was cut into pieces.
Now I am smooth and even.
I am called boards.
Use me for your house."

MAKING FURNITURE

50. THE DINING ROOM

"Furnish me," says the dining room.
"I need six chairs, a large round table, and a sideboard.
Won't you dress me first?"

51. THE KITCHEN

"Please furnish me," says the kitchen.
"I need only a stove, a table, and a chair;
You have already made my sink and my tubs.
Won't you dress me next?"

52. THE BEDROOMS

"What would you like to have in the bedrooms, mother?" asked the furniture makers.

"I want a pretty white bed, a bureau, a comfortable chair, and a rug in each room," said mother.

53. THE SITTING ROOM

"We must have a smooth table," said father.

"We must have six chairs for our family," said mother.

"I want a bookcase for my books," said little brother.

"Can't I have a piano?" said little sister.

"Shall we buy the furniture?" asked big brother and big sister.

"Oh, we are all going to work very hard and make it," said father.

They all worked very hard indeed, and made some fine furniture.

54. THE FURNITURE DANCE

We are all so happy and glad,
Happy and glad, happy and glad,
We are all so happy and glad,
Now that we are made.

We will make the families sing,
Families sing, families sing.
We will make the families sing,
When the bills are paid.

A THRIFT LESSON

(Given in First Grade)

I. *Situation which gave rise to the problem*

(1) Mice eating corners of charts, paper rulers, etc., and nibbling at the wall paper in the houses made by the children, in order to get the paste.

(2) Pieces of buttered bread discovered in a corner of the room, behind the teacher's desk.

II. *The problem*

How shall we get rid of these pests?

III. *Steps in solving the problem*

(1) Why get rid of the mice?

(*a*) "They eat our food."
(*b*) "They destroy things by their nibbling."
(*c*) "They may carry disease."
(*d*) "They frighten us."

(2) Do mice help us in any way?
(Find out, since you cannot answer now.)—An assignment.

(3) What do they do with the cloth, paper, and food which they carry away?
(*a*) "They make nests."
(*b*) "They feed their babies."

(4) Are they troubling the other grades?—An assignment. If so, perhaps we can find out how to help these grades.

(5) Why are they troubling us?
"Mice wouldn't go where they weren't fed."

(6) How are we feeding them?
A decision to change the position of the teacher's desk had brought to light four or five pieces of buttered bread, hidden between desk and wainscot and several mouse holes in the wall.

(7) How did the food get there?
(*a*) It must have been left in desks by children *who brought too much lunch.*
(*b*) Mice or rats carried it away from these desks.

(8) How much food should you bring to school?
This opened a discussion of the whole problem of packing and eating lunches; of food conservation.

(9) What should we do with food that may be left from our lunches?
Take it home—(*a*) for mother to use any untouched bread in puddings.
(*b*) to feed to animals that help us.

(10) Whom will you help if you do this?
  (*a*) Homes—Saving food:
    (1) by packing smaller lunches.
    (2) by using remnants.
    (3) by feeding scraps to pets.
  (*b*) School—Keeping mice away.
  (*c*) Nation—Saving in home saves for the country, especially during the war and in the time of need following war.
  (*d*) Belgian children—Enough bread in that corner to feed a Belgian child for a day.

(11) Which would you rather help to feed, the rats and mice, or the soldiers and the Belgian and Polish babies?

IV. *The Solution* (Summary, and practical outcomes of lesson)

What, then, shall be done?
  (*a*) Pack lunches with more care.
  (*b*) Make use of any remnants.
  (*c*) Close up all the mouse holes.
  (*d*) Bring traps.

Story in connection with this work—*The Pied Piper*

NUMBER RHYMES

(A book made and illustrated for first grade. The rhymes were worked out by all the second-grade children. Each child then made his own copy and illustrated it as he chose. For instance, for the third rhyme one boy drew a group of three beds and one bed standing alone, each holding a sleeper with his mouth wide open.)

One and one are two.
I found some shoes, too.

One and two are three.
See the apples on the tree.

One and three are four.
Hear the people snore!

Two and two are four.
See the hats from our store.

One and four are five.
See the bullfrogs dive.

Three and two are five.
My birds are still alive.

One and five are six.
See the yellow chicks.

Three and three are six.
Houses are built of bricks.

Four and two are six
Soldiers from Camp Dix.

Five and two are seven.
Four less than eleven.

One and six are seven.
Stars shine up in heaven.

Three and four are seven.
Boats sail on the Devon.*

One and seven are eight.
Soldiers are tall and straight.

* The children being unable to find another rhyme for seven, the teacher told them that there is a river in England named the Devon.

Six and two are eight.
I caught fishes with fat bait.

Four and four are eight.
Too many shoes for Kate.

Five and three are eight.
See the lilies tall and straight.

Six and three are nine.
Rats are swimming in the Rhine.

Seven and two are nine.
See the dresses on the line.

Five and four are nine.
See the cats and kittens dine.

One and eight are nine
Children in a line.

One and nine are ten
See the bears near the den.

Five and five are ten.
See the pigs in the pen.

Seven and three are ten.
See the clocks that wake up men.

Six and four are ten
Pretty flowers in the glen.

Eight and two are ten.
See the bunnies in a pen.

JINGLES OF AN ILLUSTRATED A B C BOOK

(Made for First Grade by Second Grade)

A is for Alice,
Who likes apples red.

B is for baby,
Who likes to play ball.

C is for cat,
With its head in a can.

D is for dog,
Dear dollie and Dan.

E is for Eddie,
Who eats Easter eggs.

F is for Fred,
Who likes to catch fish.

G is for grandmother,
Who likes boys and girls.

H is for Helen,
Who wears a red hat.

I is for icicles,
Made of hard ice.

J is for Jamie,
Who likes good jello.

K is for Katie,
The queen of the king.

L is for lily,
That lives by the lake.

M is for Mahlon,
Who likes to play marbles.

N is for Ned,
Who drives in the nails.

O is for Oliver,
Who sees a big owl.

P is for pansy,
So pretty and purple.

Q is for quill,
Costing a quarter.

R is for rat,
See how he runs!

S is for sister,
Who likes good sodas.

T is for top,
A bright-colored toy.

U is for U.S.A.,
Our Uncle Sam's union.

V is for violets,
That grow in the valley.

W is for Walter,
Who sits on the wall.

X is in box,
Holding eggs six.

Y is for Y.M.C.A.,
Which helps all of you.

Z is for zebra,
Who lives in the zoo.

LETTER TO THE HEAD OF THE DOMESTIC ARTS DEPARTMENT

The Training School, Trenton, N. J.
December 11, 1918.

Dear Miss ———,

The Second Grade are playing Department Store. We are stocking our clothing department for the families in First Grade. We need more materials. If you have some pieces left over, will you give them to us? We shall be very glad if you can help us.

Your friends,
Second Grade.

WAYS OF ORDERING GOODS

(1) *By letter*

500 Monmouth St., Trenton, N. J.
January 27, 1919.

The Model Department Store,
Corner of North Clinton Avenue and Monmouth St.,
Trenton.

Gentlemen,

Please send me 10 inches of lace like the enclosed sample, one spool of white cotton, number 70, and a package of needles, number 8. Please send a bill with the goods. You will find the address at the top of the page.

Yours truly,
Annie K. Smith.
(Mrs. John Smith.)

(2) *By telephone*

The teacher introduced this lesson by telling the children that she was Mrs. Smith, and that she needed some more serge like that which she had bought at the Model Store the day before. "But see how hard it is raining, and I must have that serge at once, for the dressmaker is here to work at the skirt. What can I do about it?"

"Telephone."

"What is the first thing you say when you take the telephone receiver off the hook?"

"Ask for a number."

So the children set to work to choose a number for their store. Since the store was in second grade and had been established to serve the first and third grades, the children suggested 123G, 1230G, 2G, 22G, as appropriate numbers, "G" standing for "grade." "2G" was chosen as the simplest.

A brief discussion of the things Mrs. Smith must make up her mind about before she telephoned ran somewhat as follows:

"She must know just what sort of serge she wants."

"How can she tell this over the 'phone?"

"Give the price." "Ask for the clerk who had waited on her when she bought the first lot."

The class decided to make a story about this telephone order; so the teacher went to the board, and wrote each sentence as the children decided, after suggestions from one another, how to word it.

"'I need some more goods for my skirt. It is raining so hard, I believe I'll telephone for it.'

"So Mrs. Smith went to the telephone and took down the receiver. She heard central say, 'Number, please.'

"'2G,' she replied.

"Then she heard someone in the Model Department Store say, 'Who is this?'

"'This is Mrs. Smith, of 500 Monmouth St. May I speak to Mr. Brown, of the dry goods department?'

"Mrs. Smith waited and soon heard Mr. Brown's voice.

"'What can I do for you, Mrs. Smith?'

"'Do you remember selling me 24 inches of blue serge yesterday? Have you more than one kind at 3 cents an inch?'

"'Yes, I remember the sale and am sure I know which piece it was. Do you need any more of it?'

"'Yes, I ought to have 10 inches more at once, and it is raining so hard that I do not want to come to the store.'

"'Very well. I'll send it up at once. Shall I charge it to your account?'

"'Yes, thank you,' said Mrs. Smith, hanging up the receiver."

(3) *By telegraph*

This lesson was opened by reviewing the ways in which goods had been bought at the Model Store and asking whether there is any other way in which orders may be given. One of the children finally suggested sending a telegram.

"Why do people send telegrams?"

"So that the message will go quickly."

"What must people do in order to telegraph?"

"Pay money."

"Suppose Mrs. Smith were in Philadelphia, what would it cost her to telegraph an order for her serge?"

No one knew this, so it was made an assignment for next day, when Tony reported 25 cts. for ten words, and 3 cts. for each additional word—with 10 cts. war tax.

Turning to Mrs. Smith's telephone message, the teacher helped the class to reduce it to these two forms—

2991 North Ninth St., Phila.,
Feb. 10, 1919.

Bought serge last Monday from Brown. Send 10 inches more immediately.

Mrs. John Smith.

"2991 North 9th St., Philadelphia, Jan. 29, 1919.
"Mr. Arthur Brown,
"The Model Department Store,
"Trenton, N. J.
"Send here immediately 10 inches serge like 24 inches bought last Monday.
"Mrs. John Smith."

Calculating the cost of these telegrams finished the lesson.

RIDDLES ABOUT TOYS

I carry a gun on my shoulder. I am brave. I beat the drum in the parade. I salute the captain. (A tin soldier.)

When it snows the children get on me and I go down the hill with them. Sometimes I play a joke on the children. I turn over and they tumble off. (A sled.)

I ran away from a store. I have on a dress, a hat, stockings and shoes. They wheel me in a baby coach. They put me under a Christmas tree for a little girl. Her name is Marian. She is to me a mother. (A doll.)

I am a thing which goes on four wheels. Boys get on me and push me with their feet. (Express wagon.)

I live in a store. The people buy me and take me home. They roll me and roll me. (A ball.)

I am on the ground and the men make me go like this ("purring" like an automobile). Then I sail all around like a bird. (An aeroplane.)

I am from the toy store. When I am in the store, people look at me. At other times they play with me. I run on wheels. I am little. (Electric train.)

People chop me down. They put me in a house. They put balls on me, and pictures. The day after New Year's they take the balls off and put them away for the next year. (Christmas tree.)

THE BOWL'S STORY

(Made by the Second Grade for The Store Reader)

One day I saw a lot of bowls sitting on a shelf in the Model Store. Some of them had pretty Indian designs on them.

One sunny day a lady came in and bought two bowls. She took them to her home. She put the bowls on the parlor table and filled them with violets.

Her neighbor, Mrs. Smith, came to call on her. When she saw the bowls, she said, "Where did you get those pretty bowls? Did you buy them from the Assunpink Indians? They look like mine. Mine were made by the Assunpink tribe."

"How can you tell bowls that belong to the Assunpink Indians?" asked Mrs. Davis.

"See the creek design on them? The Assunpink tribe got its name from the Assunpink creek. That is their symbol."

Just then the bowl fell to the floor with a loud thump.

"Oh, dear! oh, dear! did it break?" cried Mrs. Davis.

Mrs. Smith picked up the bowl. It was not even cracked. She laughed and said, "Don't worry, Mrs. Davis. The bowls made by the Assunpinks never break, for they are made very well."

LETTER TO A FORMER STUDENT TEACHER

Trenton, New Jersey.
March 17, 1919.

Dear Miss ———,

We have the store painted now. We had a big sale last week. We have made hats and dresses for the store. We have a notion counter.

We have made an Indian village on the sand table. We have wigwams made out of real skin. We made some Indian bowls.

We are going to have a play. We are going to have a dance in it, and singing, too.

We are good workers. The teachers are very good to us. We have lots of fun at recess. I have good marks on my report.

Yours truly,

Benjamin Willitts.

ADVERTISEMENTS

SECOND GRADE

FOR SALE

.—.—.—.—.—.—.

Well-made Furniture
Pretty Rugs

.—.—.—.—.—.—.

At the Model Department Store

BOWLS FOR SALE
Attractive Bowls!
Decorated
with
Indian Symbols
Come early and have first choice
FRIDAY MORNING

FOR SALE
Silk Dresses
Cotton Dresses
Linen Dresses
BARGAINS!
At the Model Department Store

SPECIAL SALE
Attractive Silk Rugs
Braided Raffia Mats
Friday at Eleven O'clock
MODEL DEPARTMENT STORE

FOR SALE
We sell silk rugs!
We sell
Braided raffia rugs!

.————————.

COME! SEE THEM!
The Model Department Store

THIRD GRADE

CHINA
New Business Started
In Third Grade
BE SURE TO COME AND BUY!

AN AUTOMOBILE ADVERTISEMENT

(used at the fair)

MERCER AUTOMOBILE
Best Racer in the World
Wins Every Race
BEST AUTOMOBILE
EVER MADE
in the
U.S.A.
BE SURE TO SEE IT!
Made by Third Grade
ADMISSION $.05

TRIPS

(One of the books made by Third Grade for their city library)

OUR TRIP TO THE LIBRARY

Third Grade decided to make a library for their city. We had to go to see one first, so our teacher took us to the public library of Trenton. Miss ——— took one group and Miss ——— took another, and we had a nice walk.

The outside is white, and it has a lot of steps and big white pillars. The inside is divided into two big rooms, one for older people and one for children.

When we got there we looked at books for a while. Some joined the library and took slips home for their parents to sign. We saw pretty pictures on the wall and bookcases full of books that we could take home when we got our cards.

OUR TRIP TO SEE THE PUBLIC BUILDINGS IN TRENTON

We went down town to see the public buildings, for we were going to make them to put in our city. Miss ——— took one group and Miss ——— took the other. Normal School girls went with us and helped us to draw the buildings.

Miss ——— took her group to the State House. Miss ——— took hers to the Court House instead. We all went to the First Presbyterian Church, the post office, the *Times* office, the city hall, and other buildings, too. We drew pictures of all of them. Then we came back to school to begin work on our buildings.

OUR TRIP TO THE POTTERY

The Third Grade went to Cook's pottery to visit it. We did not have to go far, for it is only a little way from our school. It is on North Clinton Avenue.

This pottery is very large. It is four stories high and ever so long. They have a big yard where they put their dishes and broken pieces of pottery.

Third Grade went to the pottery because we are making a tea set for the First Grade as a surprise, and we want it to be very nice. We thought that if we saw some dishes there it might help us to make ours better.

While we were in the pottery, we saw the kilns. We saw them making different things, and we also saw where they wash the clay. It is washed in very large bins. When they get the clay ready, they make plates, saucers, cups, and all kinds of things.

When we get our clay we are going to make a tea set for First Grade. Some of the children are going to make saucers; some are going to make cups; some of them pitchers; some of them plates, and several other things that go with the tea set.

There is a green room where they take the dishes.

Everything that is made goes to the green room before it is put in the kilns. When they put the dishes in the kilns, they make a bright fire. This bakes the dishes. This is done so that they will get hard and they can be used without breaking. When they are done, they are taken out. Then they are decorated and baked again.

PUBLIC BUILDINGS

(One of the books made by Third Grade for their city library)

THE STATE HOUSE

The State House is a little out from the heart of the city. It is made of marble and it has a dome on top. The dome is painted gold.

In the State House they make the state laws. These are made by the state legislature.

It also has a room called the State Museum. Here they have stuffed animals, many kinds of money, and many other things.

There is a park around the State House. People can go there and sit and look at the Delaware River.

Trenton has to have the State House because Trenton is the capital of New Jersey.

You may want to know what the head office in the State House is. It is the governor's office. Governor Edge is the governor.

L. M. M.

BANK

There is a bank on the corner of West State and Warren Streets. The people of Trenton put their money in the bank. They can take money out of the bank. They cash checks in the bank. The people who give checks to other people must be sure they have money in the bank to pay the amount of the checks. When people open a bank account, they get a bank book and a check book.

The head of the bank is called the president.

Jack.

THE BANK

This bank is made of white stone. People put their money in the bank. They also put Liberty Bonds in it. They may also take money out of the bank. They have their checks cashed there.

People who have valuable papers or jewelry often put them in the bank for safe keeping.

L. M. M.

TRENT THEATER

The Trent Theater is on Warren Street. The people go to see moving pictures. There are often good plays there, too.

The Trent Theater is made of brick. It is a very nice place.

The people like to go to see the show.

The ticket box woman stands in a room and sells the tickets.

Helen Gominger.

THE Y.W.C.A.

The Y.W.C.A. is on Academy Street. The girls go to the Y.W.C.A. every Monday. The girls knit socks and they knit baby booties.

There is a large gymnasium in the Y.W.C.A. where the girls play basket ball. Meetings are held nearly every night for the girls who want to go. The secretary has charge of this work and works hard for all the girls.

Andrew Rosati.

THE BARRACKS

The Barracks is on Willow Street, just back of the Art School. The Barracks was used as a place of defense during the Revolutionary War. The Red Cross workers meet there now.

There is antique furniture there. There is a bed in which Washington slept when passing through Trenton. He stayed here with his regiment.

You can see the Delaware River from the Barracks.

W. Ellsworth Smith.

THE ARMORY

The Armory is along the canal bank. It is back of the City Hall. It is a large red building, made of bricks. Ammunition and supplies are stored here. The soldiers come here to drill.

The automobile show is held here every year, and dances are held for the benefit of the Red Cross and the Liberty Loan drives.

Marion.

THE FIRST PRESBYTERIAN CHURCH

The First Presbyterian Church is on East State Street, not far from Broad Street. It is made out of cement. It is a very pretty church and has an iron fence across the front. The people go to church to hear the minister talk about the Bible.

Trenton has to have churches because the people like to go there. There are many other churches in Trenton besides this one.

Irving.

THE CREMATORY

The crematory is on Southard Street. It is used for burning the garbage.

The garbage men go around the streets to get the garbage. Then they burn it in the crematory, and after the garbage is burned, the men leave it in the yard.

Fran

THE HIGH SCHOOL

The High School is on the corner of Hamilton Avenue and Chestnut Avenue. This is called the Senior High School.

It is made of white stone and it has a tower. The tower is made of stone, too.

In the High School there are many rooms. There are many pupils in the High School.

They have a High School so that pupils will learn. Dr. Wetzel is the principal of this school.

Raymond.

THE COURT HOUSE

The Court House is on the corner of South Broad and Market Streets. In it they make Mercer County laws. All county affairs are taken care of there. Juries are held in the Court House.

County schools and county roads and bridges are taken care of. The board of freeholders is the head of the affairs of the county.

Samuel Rifkin.

CITY HALL

The City Hall is on East State Street. It is not far from the heart of Trenton. People pay their taxes and water rents there.

The mayor of Trenton has his offices in the City Hall. The commissioners of parks and roads have offices there, too. All the public offices of the city are taken care of in this building.

The City Hall is a very large building. It is made of white stone.

Horace.

THE STATE PRISON

The State Prison is made of brown stone. The building takes up a whole block. It is on Third Street. There is an iron wall all around it.

The criminals from all over the state are brought there.

Burton S.

MERCER HOSPITAL

The Mercer Hospital is on Bellevue Avenue. It is a large red brick building and very pretty.

There are doctors and nurses in it. They take care of the sick people. When the people are better, they go home. There is one superintendent, a head doctor, and a head nurse.

There are many private rooms in the hospital for the rich and next to the rich. The people that are poor go to the wards and there they are taken care of.

There are operating rooms in every hospital. The nurses are all dressed in white and so are the doctors. All the rooms are white and the operating room is white, too.

Elizabeth G. Carnagy.

THE LIBRARY

The Library is on Academy Street. It is for the children to get books. It supplies all the people with books. Before they give the books to you, you have to have a card, and then you can have the book. You must pay if you do not have them back on time.

The third grade has a library in the class room. Three children have charge of it. We have cards and everything, just like the public library. We like to take books home.

Genevieve Clark.

POST OFFICE

The Post Office is on East State Street. It is run by the Government. They sell one-cent stamps, two-cent stamps, special delivery stamps, Thrift Stamps, and postal cards. You can also have letters registered. The postmaster is the head. The letters are all stamped before the letter carriers take them away.

Daniel.

STATE NORMAL SCHOOL

The State Normal School is on Clinton Avenue. The city needs it for the children to learn to write and read and to do many other things. The big people come here to train so they can teach the children.

Dr. Savitz is the head of our school. He is very good to us. We have a very big yard to play in. We have balls to play with, and many other things, too.

Marguerite.

CITY ACCOUNTS

(Excerpts from this volume made for the library of Victory City)

Cost of Signposts

How much must Victory City pay for its signposts?
How many inches of wood in one post?

Cross-piece ..... 4 in.
Standard .....+ 5 in.

9 in. in one post

How many inches of wood in 25 signposts?

9
× 25

225 in. = about 20 ft.

How much would 20 ft. of wood cost at $.06 per ft.?

$.06
× 20

$1.20

How much shall we pay the carpenter for three hours' work at $.60 per hour?

$.60
× 3

$1.80 cost of labor
+ $1.20 cost of wood

$3.00

Cost of signposts—$3.00.

Cost of Bridges

How much must Victory City pay for its bridges?
How many bridges are there?

Steel bridges 2
Cement bridges 4
Wooden bridges 9

How much did the wooden bridges cost?

{ 1 ft. of wood 2 in. wide costs 6 cts.
Each bridge is 6 in. long and 4 in. wide and has a strip 2 in. wide along each side. }

2 strips of 2-in. wood in the floor of the bridge
+ 2 strips of 2-in. wood in the sides

4 strips needed

6 in. length of 1 strip 6

$\times$ 4

Length of 4 strips = 24 in.

24 in. = 2 ft. ($2 \times 12 = 24$)

.06

$\times$ 2

.12 cost of wood for 1 bridge

.12

$\times$ 9

Cost of wood for 9 bridges = $1.08

How much did the labor cost?

Three hours the carpenters worked

Fifty cts. per hour the city pays ... .50

$\times$ 3

Cost of labor for 9 bridges = $1.50

$1.50

+ $1.08

Cost of wooden bridges = $2.58

How much did the cement bridges cost?

.02 for 1 can of cement
.01 for 1 can of sand
.05 for cigar-box mold
.01 for strip of tin
—
.09 cost of material for 1 bridge

.09
× 4
—
.36 cost of material for 4 bridges

How much did the labor cost? Four hours.

$.70 per hr. the city pays
× 4
—
$2.80 cost of labor for 4 bridges
+ .36 cost of material
—
$3.16 = Cost of cement bridges

How much did the steel bridges cost?
(This problem was not completed.)

Cost of the Creek

How much did Victory City pay for its creek?
What did the material cost?

12 cans of cement at 2 cts. 02
× 12
—
Cost of cement = .24

12 cans of sand at 2 cts. each + .24
—
Cost of material = .48

What did the labor cost? Three hours.

$.70 cts. per hr. the city pays
× 3

$2.10 cost of 3 hrs. work
+.48 cost of material

$2.58 = Cost of the creek

Cost of the River

How much did the river cost?

1 can of cement costs 2 cts. .... .02
20 cans of cement were used .... × 20

.40 for cement

1 can of sand costs 1 ct.
40 cans of sand were used ..... .40 for sand

Materials cost ..... .80

How much for labor?

70 cts. per hr. for cementing ... .70
6 hrs. work done ..... × 6

Work cost $4.20

$4.20 cost of labor
+ .80 cost of materials used

$5.00 = Cost of the river

The City Monuments

What was paid for the monuments in city and park?
How many monuments are there? 6
How much clay to make one? 3 balls, average.

What did the material cost?

.12 for 1 ball of clay
× 3

.36 cost of clay for 1 monument

.36
× 6

Cost of clay for 6 monuments... $2.16

How much for labor? Three hours
$.80 per hr. the city pays for modeling
× 3

$2.40 cost of the work on 6 monuments
+ $2.16 cost of the clay in 6 monuments

$4.56 = Cost of the monuments

Subscriptions for the Monuments

3 people gave	5 cts.	3 × 5 = .15
3 people gave	10 cts.	3 × 10 = .30
4 people gave	25 cts.	4 × 25 = 1.00
3 people gave	35 cts.	3 × 35 = 1.05
3 people gave	65 cts.	3 × 65 = 1.95
3 people gave	85 cts.	3 × 85 = 2.55
2 people gave	1.15 cts.	2 × 1.15 = 2.30
		$9.30

$9.30 subscribed for the monuments
— $4.56 cost of the monuments

$4.74 put into bank as a fund for repairs
+ $175.72 already in the bank

$180.46 city funds

FINAL ACCOUNT

$3.00 cost of signposts
$2.58 cost of wooden bridges
$3.16 cost of cement bridges
$2.58 cost of the creek
$5.00 cost of the river
$4.56 cost of the monuments
$6.10 cost of the canals — These problems not copied by the
$5.66 cost of the roads — student teachers

cost of the houses
cost of the public buildings
cost of the reservoir
cost of filling and grading
cost of the steel bridges

These problems not completed—another illustration of unfinished work in the hands of student teachers

Total cost of construction

BOOKS IN THE LIBRARY OF VICTORY CITY

[LIST AS MADE BY THE CITIZENS]

Number	*Name*	*Author*
1	Wake Robin Series—Volume 3	Holtzclaw
2	The Adventures of Jerry Muskrat	Burgess
3	The Adventures of Mr. Knocker	Burgess
4	The Adventures of Old Mr. Toad	Burgess
5	The Adventures of Grandfather Toad	Burgess
6	Gods and Heroes	Francillon
7	In Mythland	Beckwith
8	Old Greek Stories	Baldwin
9	In Fableland	Serl
10	Fifty Famous Stories Retold	Baldwin
11	Everyday Classics III	Baker and Thorndike
12	Fairy Stories and Fables	Baldwin
13	Classic Stories	McMurry, L. B.
14	Stories of Norse Gods and Heroes	Klingensmith
15	Merry Animal Tales	Bigham
16	Insect Life	Weed
17	Outdoor Studies	Needham
18	Nature Study by Months	Boyden
19	Short Stories of Our Shy Neighbors	Kelly
20	Round the Year in Myth and Song	Holbrook
21	Seed Babies	Morley
22	Cattails and Other Tales	Howliston
23	Friends and Helpers	Eddy
24	Little Flower Folks	Pratt
25	The Jungle Book	Kipling
26	Just So Stories	Kipling
27	In the Animal World	Serl
28	White Patch	Patri
29	The Bears of Blue River	Major
30	Geographical Nature Studies	Payne
31	Geographical Reader	Carpenter
32	Big People and Little People of Other Lands	Shaw

33 Holland Stories	Smith, M. E.
34 From Other Lands	Holbrook
35 Filippo, the Italian Boy	Starr
36 Martha of California	Otis
37 Lolami, the Little Cliff Dweller	Bayliss
38 Children's Stories	Dickens
39 Stories of Great Americans for Little Americans	Eggleston
40 Science Readers—I, II, III, IV, V, VI	Murché
41 Household Science Readers	Longmans
42 Second and Third Readers	Young and Field
43 The Progressive Course in Reading—Books II and III	Aldrich and Fields
44 The Progressive Road to Reading—Books II and III	Burchill, *et al*
45 Pathways in Nature and Literature	Christy and Shaw
46 The Easy Road to Reading	Smith, C. J.
47 Readers—II and III	Free and Treadwell
48 Beacon Third Reader	Fassett
49 The Richmond Second Reader	
50 Harper's Third Reader	
51 Mathematics for Common Schools	Walsh
52 Choice Literature	Williams
53 The Blue Bird for Children	Leblanc
54 Fairy Tales and Stories	Andersen
55 Fairy Tales	Grimm
56 Robinson Crusoe	Defoe
57 Kindergarten Stories and Morning Talks	Wiltse
58 The Horace Mann Readers, Book III	Hervey and Hix
59 Alice in Wonderland	Carroll
60 How the Present Came from the Past —Book I	Wells

POEMS MADE IN THIRD GRADE

THE BITTERSWEET GIRL AND THE PEANUT-BRITTLE BOY

There were once a bittersweet girl
And a peanut-brittle boy.
They sat on the shelf as still as mice,
And the boy to the girl was a joy.

All at once a footstep was heard.
"What is that?" said the boy to the girl.
"Why that is the child that belongs to the house,
The girl with the beautiful curl."

"She sneaked to the shelf on tiptoe.
She wanted a taste of our candy.
But just as she reached to take her first bite,
We slipped through a hole that was handy."

Group work.

FLOWER POEMS

THE VIOLET

I am a little blue violet.
I grow in the grass so deep.
I love the children to pick me,
For I am so pretty and sweet.

Lester.

THE DAISY

I'm a pretty little thing.
I always come in the spring.
I live in the meadow, deep, so deep.
I sleep in the winter and never peep.
Oh, see my pretty yellow head
And hat of spotless white!

Helen.

THE ARBUTUS

I saw a lovely arbutus.
It grew under leaves so deep.
And out of its pretty pink petals,
I smelled the perfume so sweet.

Raymond.

THE DANDELION

Yellow little dandelion,
Growing on the lawn,
Sleeping through the long, long night,
Waking with the dawn.

Nicholas.

THRIFT STAMP JINGLES

I. Hush, little Thrift Stamp,
Don't you cry!
You will help the boys,
By and by.

II. The rose is red,
The violet's blue.
I have bought Thrift Stamps.
How about you?

III. Little Americans,
Do your bit,
And help to fill
A soldier's kit.

IV. Buy, buy Thrift Stamps;
Buy, buy, Bill;
And Uncle Sam's soldiers
Will the Kaiser kill.

V. Mary had a little stamp,
Its coat was darkest green,
And everywhere that Mary went
That stamp was to be seen.

VI. Tramp, tramp, tramp, the boys are marching,
They are selling Thrift Stamps at the door.
Oh! let us go and buy some,
And help to win the war.

THE PRIMITIVE PLAY

Characters—Mahlah, the mother
Shoolah, the father
Bowlah, the young son
Weelah, the baby

ACT I

Scene I—The Tree Family.

Mahlah—Oh, but I am getting hungry! Isn't it time to eat?

(Weelah cries.)

Shoolah—Don't cry, Weelah. Bowlah is swinging from branch to branch. He is having a fine time. (Weelah stops crying.)

The sun is high in the sky, so it is time to eat. Come, Bowlah, we will go for some wild grapes, roots, and berries.

Bowlah—I am having such a fine time up here! But wait for me. I'll be down in a minute. (Bowlah comes down.)

Don't begin to cry again, Weelah. Father and I will get some food for you and mother.

(Shoolah and Bowlah go out. Mahlah sings a song to Weelah.)

"Hush-a-bye, my little Weelah,
Do not cry. Mahlah is here.
For no harm can come to baby
When her own Mahlah is near."

(Bowlah now rushes in.)

Bowlah—Oh, Mahlah, just look at these fine berries!

(Mahlah gives Weelah a berry.)

Shoolah—Here are nice grapes, roots, and nuts, too. Now for a fine feast! (They all sit down and eat.)

Bowlah—To-day, as I was picking berries, a big snake came out of the bushes. I picked him up by the tail and killed him.

(Bowlah shows how he killed the snake. Weelah laughs.)

Shoolah—Isn't he a brave boy?

Mahlah—Yes, that's a good way to kill a snake.

(They continue to eat. The roar of a lion is heard. They all jump up and listen.)

Shoolah—There he is! You can see him coming through the bushes.

Mahlah—Be quick! Let us climb up a tree.

(They do this. The big lion prowls around under the tree. He begins to eat the food.)

Shoolah—Oh, see him eating our food!

Bowlah—Let us try to scare him off.

(He breaks off a branch and strikes the lion on his back. The lion runs away.)

Mahlah—I'm still hungry. Let us go down and finish our feast. We will share what the lion has left. (They eat.)

Bowlah—Oh, father, I see a big snake over there in the bushes. Let me go over and kill him.

Shoolah—No, Bowlah. Don't go yet, for I fear the lion is not far away, and we had better stay together.

Bowlah—Mahlah, please tell me a story.

Mahlah—Yes, you have been good children to-day, so I will tell you "How the baboons got their tails." * (She tells the story.)

Scene II—Man the King of the Forest.

Time—Early the next morning.

(Shoolah and Mahlah awaken. They stretch and rub their eyes. Shoolah looks all around under the trees to see that there are no wild beasts near, before Mahlah comes down.)

Shoolah—I hear something moving in the bushes. It seems to be over that way (pointing). Can you see anything, Mahlah, from up there?

* Wells, M. E.—*How the Present Came from the Past*, Book i, p. 103.

Mahlah—It's a bear! Quick! Bring some stones up with you.

(Shoolah climbs the tree and throws a huge stone at the bear. It hits him just between the eyes and he falls. Shoolah and Bowlah swing themselves to the ground.)

Bowlah—Oh, father! The bear isn't quite dead yet. Let us bite him and stick our knives (sharp stones) into him.

Shoolah—Yes, maybe that will help to kill him.

(They bite into the bear.)

Bowlah—Oh, isn't that good?

Shoolah—Mahlah, come here.

(Mahlah brings Weelah with her down the tree. She helps the other two to eat the bear meat, and gives Weelah a piece to suck. A cold wind blows over the forest. They all shiver.)

Mahlah—It is getting very cold. What shall we do to keep ourselves warm?

(Shoolah happens to touch the skin of the bear.)

Shoolah—Oh! How nice and warm this bear's skin feels! This would be good to keep us warm.

(They all get close to the bear.)

Mahlah—Let us tell the rest of the people what we have discovered.

(They call to all of the other tree families of that forest. The families come rushing in. They call out, "What is the matter?")

Shoolah—Come, rejoice with us. We have killed a bear. It is good to eat. Its skin will keep us warm.

People—Three cheers for Shoolah's family!

Shoolah—Come, let us dance and be merry!

(They all dance and sing around the animal's body.)

Curtain

VITA

MARGARET ELIZABETH WELLS, born at Reading, Penna., October 18, 1879. Graduated from the Reading High School in 1897 and from the City Normal School in 1899. Taught in the grade schools of that city, 1899–1910. During that time, organized and supervised the first children's gardens in the city, as well as three girls' clubs, one for small children, one for older children, one for working girls.

Student at Teachers College, Columbia University, February, 1910-June, 1911, receiving a scholarship in June, 1910. Attended the Summer School of Cornell University, 1911. Taught in the Department of Pedagogy, State Normal School, Indiana, Penna., 1911–1912. Supervised Grades III and IV, Speyer School, Teachers College, 1912–1914, taking courses at Teachers College during these two years.

Having received a graduate scholarship, attended Teachers College during the summer session of 1914 and the year of 1914–1915, beginning work meanwhile on a series of histories: *How the Present Came from the Past.* Taught in the Training School for Teachers, Brooklyn, N. Y., September, 1915–February, 1916, resigning to complete the first two books of the series: *The Seeds in Primitive Life* and *The Roots in Oriental Life,* published by The Macmillan Co., 1917.

Supervised the Primary Department of the Training School of the State Normal School, Warrensburg, Mo., February, 1917–August, 1917. Assistant supervisor of practice, State Normal School, Trenton, N. J., 1917–1919. Studied at Teachers College, Columbia University, 1919–1920.

B.S. and Bachelor's diploma in Elementary Supervision, 1911.

A.M. and Master's diploma in Elementary Supervision, 1915.

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